FACTORS PREDICTING STUDENTS' DECISION TO CHOOSE THE APPRENTICESHIP-BASED PRE-DIPLOMA PROGRAM

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AN ABSTRACT

of the dissertation of *Bikash Ghaju* for the degree of *Master of Philosophy in Education (Development Studies)* presented on 19 November 2024 entitled *Factors Predicting Students' Decision to Choose the Apprenticeship-Based Pre-Diploma Program.*

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Program choice is a big dilemma for students. After the Secondary Education Examination (SEE), students have options in the general and technical streams for further study. Moreover, in technical education, SEE appeared students can pursue an 18-month pre-diploma and apprenticeship-based pre-diploma program. The apprenticeship-based pre-diploma program caters to free courses in different occupations in workplace-based learning with an earning approach. As for its features, it is likely to be of great attraction to the program. However, there is a skill mismatch between technical schools and workplace industries; thus, there is a dropout issue in apprenticeship-based pre-diploma programs. There are few articles and working papers on the Nepal program in terms of choice of apprenticeship-based pre-diploma program. Thus, this study explored the factors predicting students' decision to choose the apprenticeship-based pre-diploma program.

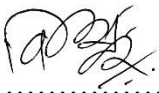
This study included a quantitative approach with an exploratory design. Constructing questionnaires from literature, vocational choice theory, and item analysis, 240 first-year students were surveyed. Statistical tools - Exploratory Factor Analysis (EFA), descriptive statistics, t-test, and ANOVA- were applied for data analysis. Similarly, reliability, validity, and ethical considerations were ensured respectively.

The study revealed three dimensions predicting students' decision to choose the apprenticeship-based pre-diploma program as a study result - personal interest,

economic outcome, and subjective norm. Among them, the most influencing factor in students' choice of the apprenticeship-based pre-diploma program was their interest in the workplace learning, followed by the economic outcome as its central feature and student benefit. Likewise, the subjective norm was found to be less influential for the program choice.

The study's findings revealed that only subjective norm significantly differed across the students' previous school types, public and private. This means that family members, friends, school staff, advertisements, and relatives influenced public and private school students differently. Besides, other factors - personal interest and economic outcome- did not differ between their school types, and all three associated factors did not differ across different demographic variables, i.e., gender, ethnicity, locale, and family.

The findings and conclusion of this study can be helpful for prospective students and their parents to assess if the program meets their interests and objectives. Similarly, the result of this study can be a good resource for technical schools to market mix and attract suitable students so that there won't be issues like absenteeism and dropout. The findings can provide insights and support policymakers in formulating viable policies for institution-industry - CTEVT linkage and address economically poor, marginalized, and academically weak students. Furthermore, future researchers in apprenticeship-based pre-diploma programs or technical education can use this study as an excellent reference to explore other content in the broader area and different methods.



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शोध सार

विकास अध्ययनमा दर्शनशास्त्रको स्नातकोत्तर डिग्रीमा विकास घजुको शोध प्रबन्धको शीर्षक "औद्योगिक प्रशिक्षणमा आधारित प्रि-डिप्लोमा कार्यक्रम छनोट गर्नका लागि विद्यार्थीहरूले गर्ने निर्णयको भविष्यवाणी गर्ने कारकहरू" ४ मंसिर २०८१ मा प्रस्तुत गरिएको थियो।

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प्रा. प्रकाश चन्द्र भट्टराई, पीएचडी

शोध निर्देशक

कार्यक्रम छनोट विद्यार्थीहरूका लागि ठूलो दुविधाको कुरा हो। माध्यमिक शिक्षा परीक्षा (SEE) पछि विद्यार्थीहरूसँग उनीहरूको थप अध्ययनको लागि साधारण र प्राविधिक धारमा विकल्पहरू रहेका छन्। सीपयुक्त जनशक्तिका लागि विद्यार्थीहरूले प्राविधिक शिक्षा तर्फ विभिन्न पेशा व्यवसायहरुमा तीन बर्षे डिप्लोमा, १८ महिने प्रि-डिप्लोमा वा २४ महिने औद्योगिक प्रशिक्षण (Apprenticeship) मा आधारित प्रि-डिप्लोमा कार्यक्रममा सहभागी हुन सक्छन्। त्यसमध्ये औद्योगिक प्रशिक्षणमा आधारित प्रि-डिप्लोमा कार्यक्रमले विद्यार्थीहरुलाई सिक्दै कमाउँदै गर्न पाउने अवसरका लागि शिक्षालय र कार्यस्थलमा आधारित शिक्षामा विभिन्न पेशाहरूमा निःशुल्क तालिम प्रदान गर्दछ। यस कार्यक्रमबाट पाउन सकिने सीप र सुविधाहरूका आधारमा यो कार्यक्रमप्रति युवाहरुको ठूलो आकर्षणको सम्भावना रहेको छ। यद्यपि प्राविधिक विद्यालयहरू र कार्यस्थल उपलब्ध गर्ने उद्योग/व्यवसायहरु बीच समन्वयात्मक समस्या देखिएको छ, त्यसैले औद्योगिक प्रशिक्षणमा आधारित प्रि-डिप्लोमा कार्यक्रम बिचैमा छोड्ने समस्या देखिएको छ। नेपालमा यस कार्यक्रमका बारेमा मुट्ठीभर लेख र कार्यपत्रहरू फेला परेका छन् तथापि यस कार्यक्रममा युवाहरुको छनोटका सन्दर्भमा अध्ययनहरू पाउन सकिएन । तसर्थ यस अध्ययनले

औद्योगिक प्रशिक्षणमा आधारित प्रि-डिप्लोमा कार्यक्रम छनोट गर्नका लागि विद्यार्थीहरूले गर्ने निर्णयको भविष्यवाणी गर्ने कारकहरू पहिचान गरेको छ।

प्रस्तुत अध्ययनमा अन्वेषणात्मक ढांचा (Exploratory Design) मा आधारित परिमाणात्मक अनुसन्धान विधि प्रयोग गरिएको छ । पूर्व साहित्यहरुको पुनरावलोकन, व्यावसायिक छनोट सिद्धान्त र प्रश्नहरुको पद विश्लेषणबाट प्रश्नावली निर्माण गर्दै प्रथम वर्षका २४० जना विद्यार्थीहरूमा सर्वेक्षण गरिएको थियो। तथ्याङ्क विश्लेषणको लागि सांख्यिकीय उपकरणहरू - Exploratory Factor Analysis (EFA), वर्णनात्मक तथ्याङ्क, *t*-test र ANOVA लागू गरिएको थियो। त्यसैगरी प्रश्नावलीको विश्वसनीयता, वैधता र अध्ययनको नैतिक पक्षहरू सुनिश्चित गरियो।

यस अध्ययनले औद्योगिक प्रशिक्षणमा आधारित प्रि-डिप्लोमा कार्यक्रम छनोट गर्ने विद्यार्थीहरूको निर्णयको भविष्यवाणी गर्ने तीन कारकहरू पहिचान गरेको छ जसमा व्यक्तिगत रुचि (Personal Interest), आर्थिक परिणाम (Economic Outcome) र व्यक्तिपरक मानक (Subjective Norm) रहेका छन् । ती मध्ये विद्यार्थीहरूको छनोटमा सबैभन्दा प्रभावकारी कारकमा उक्त कार्यक्रम कार्यस्थलमा आधारित हुनु, आर्थिक परिणाम यसको प्रमुख विशेषताका रुपमा हुनु र विद्यार्थीहरूको लागि अवसरका रूपमा हुनु पाइएको छ भने कार्यक्रम छनोटका लागि व्यक्तिपरक मानक कम प्रभावकारी पाइयो।

अध्ययनको नतिजाले देखाउँछ कि विद्यार्थीहरूको अघिल्लो विद्यालय प्रकार - सार्वजनिक र निजीमा मात्र व्यक्तिपरक मानकको असर फरक पाइएको छ। यसको मतलब परिवारका सदस्य, साथीभाइ, विद्यालयका कर्मचारी, विज्ञापन र अन्य आफन्तहरुले सार्वजनिक विद्यालयका बिद्यार्थीहरुलाई कार्यक्रम छनोटमा निजी विद्यालयका विद्यार्थीहरूको तुलनामा बढी प्रभाव पार्छन्। यसबाहेक अन्य कारकहरू व्यक्तिगत रुचि र आर्थिक परिणामहरुको प्रभाव तिनीहरूको विद्यालय प्रकार अनुसार फरक पाइएन । साथै तीनै कारकहरू अन्य जनसांख्यिकीय चरहरू अर्थात् बिद्यार्थीको लिङ्ग, जाति, बसोबास स्थान र पारिवारिक आय अनुसार सार्थक फरक पाइएन ।

यस अध्ययनको प्राप्ति र निष्कर्ष कार्यक्रमका सम्भावित विद्यार्थीहरू र उनीहरूका अभिभावकहरूलाई कार्यक्रमले उनीहरूको रुचि र उद्देश्यहरू पूरा गर्छ कि गर्दैन भनेर मूल्याङ्कन

गर्न उपयोगी हुन सक्छ। त्यसैगरी यस अध्ययनको नतिजा प्राविधिक विद्यालयहरूका लागि उपयुक्त बजारीकरणको प्रयोगका लागि उपयुक्त विद्यार्थीहरूलाई आकर्षित गर्नका लागि राम्रो सन्दर्भ सामाग्री हुन सक्छ ताकि त्यहाँ अनुपस्थिति र बिचैमा छोड्ने जस्ता समस्याहरू नहोस्। अध्ययनका निष्कर्षहरूले उद्योग/ व्यवसाय र CTEVT बीच गहिरो सम्बन्धको लागि सम्भाव्य नीतिहरू तर्जुमा गर्न र आर्थिक रूपमा गरिब, सीमान्तकृत र शैक्षिक रूपमा कमजोर विद्यार्थीहरूलाई सम्बोधन गर्न नीति निर्माताहरूलाई उपयुक्त विषयबस्तु प्रदान गर्न सक्छ। यसका साथै औद्योगिक प्रशिक्षणमा आधारित प्रि-डिप्लोमा कार्यक्रम वा प्राविधिक शिक्षामा रुचि हुने भावी अनुसन्धानकर्ताहरूले यस अध्ययनलाई थप फराकिलो क्षेत्र र फरक विधिहरूका साथ अध्ययन अनुसन्धान गर्न उपयुक्त सन्दर्भको रूपमा प्रयोग गर्न सक्छन्।

..... ४ मंसिर २०८१

विकास घजु

उपाधि उम्मेदवार

This dissertation entitled *Factors Predicting Students' Decision to Choose the Apprenticeship-Based Pre-Diploma Program* is presented by *Bikash Ghaju* on 19 November 2024.

APPROVED BY

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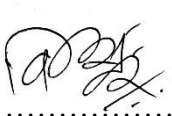
I understand and agree that my dissertation will become a part of the permanent collection of the Kathmandu University Library. My signature below approves the release of my dissertation to any reader upon request for scholarly purposes.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DECLARATION

I hereby declare that this dissertation is my original work, and it has not been submitted for candidature for any other degree at any other university.

19 November 2024

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DEDICATION

This dissertation is dedicated to the memory of my mother

Sundari Maya Ghaju

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The completion of this dissertation could not have been possible without the invaluable guidance of Prof. Prakash C. Bhattarai, PhD, my beloved dissertation supervisor. I owe a debt of gratitude to Dr. Prakash Kumar Poudel and Mr. Richan Shrestha for their constant support from the beginning to the completion of this work.

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ABBREVIATION

ANOVA	Analysis of Variance
BTI	Butwal Technical Institute
CBS	Central Bureau of Statistics
CEHRD	Center for Education and Human Resources Development
CFA	Confirmatory Factor Analysis
CTEVT	Council for Technical Education and Vocational Training
ECDF	Early Childhood Development Facilitation
EFA	Exploratory Factor Analysis
EU	European Union
GPA	Grade Point Average
IVET	Initial Vocational Education and Training
KMO	Kaiser-Meyer-Olkin
KUSOED	Kathmandu University School of Education
MTVET	Master in Technical and Vocational Education and Training
NEB	National Examination Board
OJT	On-the-job Training
PAF	Principal Axis Factoring
PCA	Principal Component Analysis
PPP	Public-Private Partnership
SEE	Secondary Education Examination
SLC	School Leaving Certificate
SPSS	Statistical Package for Social Sciences
STEM	Science, Technology, Engineering, and Mathematics
TECS	Technical Education in Community School
TSLC	Technical School Leaving Certificate
TVET	Technical and Vocational Education and Training
UMN	United Mission to Nepal
VET	Vocational Education and Training
WCC	Writing and Communication Center

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CHAPTER I
INTRODUCTION

Nepal divides its education system into basic, secondary, and higher levels. From the Gurukul system and British education system to the present form of education, Nepal has improved in access to education; however, access to quality education and continuity in education for children from rural and disadvantaged backgrounds are still big challenges (Sah et al., 2024). We need to strengthen general and technical education to tackle these challenges. After the Secondary Education Examination (SEE), previously known as the School Leaving Certificate (SLC), students have choices in two domains in Nepal — general and technical education. In the general streams, students can choose from programs such as science, humanities, management, and law in grade 11 (+2), which includes the A-Level.

Additionally, some general schools offer a technical stream for students ages 9–12. Similar to general education, technical education offers three-year diploma courses, an 18-month pre-diploma, and a two-year pre-diploma, also known as apprenticeship-based Technical SLC (TSLC) program. The Center for Education and Human Resource Development (CEHRD), formerly known as the Department of Education, manages general education. The Council for Technical Education and Vocational Training (CTEVT) oversees technical education, ranging from short courses to 3-year diploma programs.

Students have multiple options in technical education. Options for a technical course include a 9-12 technical stream, a diploma course comparable to grade 12, and 18-month and 24-month pre-diploma courses. In this context, what factors made the students choose a 24-month apprenticeship-based pre-diploma program in pre-diploma courses that are equivalent to SEE/SLC?

So far, there has been little exploration of the factors that predict students' decision to choose an apprenticeship-based pre-diploma program in Nepal. This research has focused on exploring the components that predict students' decision to choose the program. This dissertation employs a quantitative approach to predict the factors, utilizing the survey method for data collection. This research uses exploratory factor analysis to explore the factors predicting students’ decisions to choose an apprenticeship-based pre-diploma program and to identify the most influencing factor

among them. In addition, this study examines the impact of factors such as gender, ethnicity, location, type of school, and family income on the decision of students to select an apprenticeship-based pre-diploma program. This dissertation ends with the conclusion and implications.

This chapter discusses the study's context, outlines its purpose, and raises research questions based on the problem statement. The chapter concludes with a discussion of the study's rationale and the delimitations and organization of the study.

Context of the Apprenticeship-Based Pre-Diploma Program

Technical and Vocational Education and Training (TVET) involves skill-based learning that directly contributes to student employment (Bhattarai, 2021). Both programs have different modalities, particularly at the pre-diploma level; these include an on-the-job (OJT)-oriented pre-diploma and an apprenticeship-based pre-diploma program, also known as dual VET apprenticeship, at the pre-diploma level. An apprenticeship-based pre-diploma program involves simultaneously learning technical education and vocational skills in two different settings—TVET schools and companies operating at the pre-diploma level in Nepal.

An apprenticeship approach is an integral part of human civilization, both in the household and workplace. The concept emerged from Germany (Fürstenau et al., 2014). The production and service sectors highly demand the learning-by-doing approach, known as the apprenticeship-based pre-diploma program. The European Union is promoting dual VET to its members through financial and organizational support to introduce apprenticeship into the formal education system. However, it also encompasses a form of skill formation, necessitating robust coordination between the regulating body, schools, and employer firms. The EU has succeeded in establishing Dual VET in the member countries; however, its success is not equal in those countries (Šćepanović & Martín Artiles, 2020).

According to Bolli et al. (2019), the apprenticeship-based pre-diploma program in Nepal is a 24-month program that began at the pre-diploma level under CTEVT in 2016. Other pre-diploma courses span 18 months, with an additional three to six months of on-the-job training (OJT) following the academic course. The main feature of the apprenticeship-based pre-diploma program is that the students or apprentices learn simultaneously in schools and companies. In Dual VET, apprentices spend the first three and a half months and last one month in technical schools, and for 19 and a half months, they study one day in technical schools and spend five days

in designated companies. Another attractive factor of the program is the prescribed incentive amount in the tripartite agreement among students, companies, and educational institutions. Following the final month of classroom instruction, students sit for the CTEVT final exam, and those who pass receive a formal pre-diploma degree.

The major attractive features of the apprenticeship-based pre-diploma program in Nepal include a simultaneous learning approach, extended duration in companies, real workplace learning, travel expenses, incentives, mentorship, and formal accreditation. Therefore, we anticipate that students, particularly those seeking direct entry into the middle-level workforce, will select the apprenticeship-based pre-diploma program as one of their top choices. Initially, the program began with two trades: electrical and mechanical engineering. In 2019, Bolli et al. included three new occupations: information technology, hotel management, and automobile engineering. The apprenticeship-based pre-diploma program with eight trades provides a wide range of learning and earning opportunities, especially to academically and financially weak students, marginalized students, and geographically remote students.

Despite its features and viability, the apprenticeship-based pre-diploma program encounters some issues related to program selection. There is a skill gap between classroom and industry learning in Nepal (Bolli et al., 2019). Another challenge is students dropping out. It significantly impacts both the program's output and the return on investment. , technical education is mostly male-dominated and preferred by the youth from remote places and socially disadvantaged groups (Safarmamad, 2017).

Among the various factors that influence the choice of an apprenticeship-based pre-diploma program, socio-cultural factors can influence them, such as family conditions, relatives and community people, and occupational work culture. The apprenticeship-based pre-diploma program seems to be promising as the students get an opportunity to work in a real setting under the supervision of the trainers with academic accreditation and incentives. Similarly, technical schools utilize companies as full-fledged labs for practical work, providing opportunities for collaboration with trade professionals and enhancing their relationship with the community. Similarly, company owners benefit from potential employees, collaboration with academic organizations, and recognition from CTEVT, which can serve as a valuable network and exposure. We have conducted the apprenticeship concept in a decentralized

approach, and it appears to be a viable program in terms of attraction, meaningful learning, access, and decent employment. Therefore, we expect to attract students and even higher education dropouts in Nepal to the emerging apprenticeship-based pre-diploma program.

Following my Master's degree in Technical and Vocational Education and Training (MTVET), I was an enumerator for research on the Dual VET Apprenticeship (apprenticeship) program in 2021. I had the opportunity to conduct a telephone survey with a selection of apprentices, non-apprentices, and employers to gather their perspectives on the program. The program's salient features—earnings during learning, a free program, employment linkage, and real-work exposure—astonished me. The program was a good idea, but the youth may not have chosen it. Numerous issues emerged, such as the program's exclusivity to academically and economically disadvantaged students, socially disadvantaged groups, and dropouts. Employers were not satisfied with the level of students, their attitude, learning capacity, their regularity, and their responsiveness.

On the other hand, students expressed dissatisfaction over their treatment as factory laborers, the lack of effective training, the lack of opportunities to work with real machines, and the lack of payment increases, even after the course concluded. I found there was a lack of coordination among technical schools, employers, and CTEVT. The new program in Nepal, apprenticeship, directly links academic qualifications and technical skills to the labor market in the real world of work. There hasn't been much research conducted in this field in our country. Thus, I decided to do research on factors predicting students' decisions to choose the apprenticeship-based pre-diploma program in Nepal.

Statement of the Problem

The apprenticeship-based pre-diploma program is emerging and viable at the policy level in Nepal, but its implementation presents significant challenges. Bolli et al. (2019), representing the voices of Nepali company owners, indicated a skill gap between classroom instruction and company demands. On the same note, Parajuli et al. (2024) also highlighted that most graduate employees enter the labor market with nominal competencies that fail to satisfy employers. One of the reasons behind it is the low quality of TVET. These studies indicate a lack of coordination between vocational schools and companies involved in the apprenticeship-based pre-diploma or TVET program in Nepal. In a study on employability of the engineering students in

Nepal, Sharma et al. (2022) also emphasize on the employability skills that is equipped by the technical colleges. The authors concluded that the graduates' transition becomes comfortable when employers find them equipped with the necessary employable skills. In the context of Nepal, it is found that employers are reluctant to collaborate with institutions, which is a major weakness of the technical program especially for the apprenticeship-based pre-diploma program. It is difficult to attract students and technical schools to the apprenticeship-based pre-diploma program until an ample number of good companies are ready and actively participate in the training cycle. Enrolling and retaining quality students, or high academic scorers, is also a challenge. One of the program's challenges is the high rate of student dropouts. This issue arises due to their socio-demographic characteristics and interactions with other students (Krötz & Deutscher, 2022). Dropout rates significantly impact the program's output and return on investment. Dropout also emotionally affects other students; that's why it is a major challenge. We select students who exhibit high interest and a positive attitude for this purpose. When the selection process is effective and systematic, there is less chance of dropout in the program.

The worldwide trend shows that poor academic performers choose TVET, which was also found in Initial Vocational Education and Training (IVET) in Tajikistan (Faudel et al., 2006, as cited in Safarmamad, 2017). Students with poor academic performance may struggle to study the curriculum and fail the theoretical portion. This can also have an impact on the investment and output of the program, particularly when it comes to producing competent graduates. Similarly, in Benin, the perception of vocational occupations such as metallic construction and mechanics as dirty led to a reluctance among high-achieving applicants to enroll in TVET courses (Bankolé, 2020). Moreover, TVET program is often viewed primarily as an opportunity for men rather than women; hence, women and girls may not find attractive trades in it (Smith, 2023). Only women make up one-third of the apprentices, as the majority of occupations in TVET program are male-dominated (Schonherr et al., 2017, as cited in Altreiter, 2021).

In 2017–18, rural areas accounted for the majority of students in IVET schools, with a ratio of 74% to 26%. We expect any program to attract people regardless of geography, gender, and qualification. Likewise, 70% of male students were in the Initial Vocational Education and Training (IVET) (Safarmamad, 2017).

People perceive TVET programs as predominantly male-oriented, catering to the needs of rural and poor youth. Therefore, society restricts access to the program and does not warmly embrace it. Social structure and inclusion in TVET, specifically women's participation, pose a significant challenge to the program's objectives in countries such as Nepal.

Talking about predicting factors, five latent factors—suitable for my needs, marketing, close people, school staff, and economic situation—were found (Safarmamad, 2017). Zhao and Wang (2020) also discovered that factors such as gender, job prospects, support from family members, senior students, and friends were significant motivators for enrolling in a modern apprenticeship-based pre-diploma program in technical higher education. We need to identify the factors that predict students' choice of an apprenticeship-based pre-diploma program, as failing to do so will hinder the attraction of potential candidates. If there is an issue with the selection of students, it is likely to lead to a dropout problem in the future. For students' access to the program and dropout reduction strategy, the highly predictive factors are to be explored, and students are to be selected accordingly.

The major problems of the apprenticeship-based pre-diploma program in TVET are skill mismatch between vocational schools and workplace companies, academically poor and rural resident students, male-dominated trades, and dropouts. And there are various attractive factors in apprenticeship-based pre-diploma programs in different places. It is crucial to identify the factors that influence the decision to choose an apprenticeship-based pre-diploma program. We expect this to assist technical schools and policymakers in formulating enrollment and dropout reduction strategies. The major causes of dropout include basic socio-demographic variables, such as gender, age, educational level, the corresponding marks, and other dropouts (Krötz & Deutscher, 2022). According to Bolli et al. (2019), students who view the pre-diploma as irrelevant are more likely to drop out; therefore, it is crucial to convince them early on through cost-benefit analysis and proper orientation. Identifying the factors that predict the choice of an apprenticeship-based pre-diploma program is crucial, as it aids in the preparation of enrollment strategies and persuasive techniques before students enter the program.

The aforementioned studies focused on the problems of TVET programs in terms of stakeholder collaboration and the demographic characteristics of the students. Only a small number of studies examined the factors that influence the

selection of apprenticeship-based TVET programs. Therefore, it's crucial to pinpoint the factors that influence students' decision to choose a specific apprenticeship-based pre-diploma program in Nepal, in order to reduce the number of dropout cases. The success of the program is essential, as there is a high level of investment from the nation, projects, designated companies, TVET schools, and even students and their parents. To prevent dropout, mismanagement, gender-related and socio-economic issues, the major predicting factors are to be explored. Therefore, we need to conduct a study titled 'Factors Predicting Students' Decision to Choose the Apprenticeship-based pre-diploma program in Nepal' to identify the factors that influence students' decision to enroll in the employable program, ensuring the program's productivity and sustainability.

The Purpose of the Study

The purpose of the study is to analyze the factors predicting students' decisions to choose an apprenticeship-based pre-diploma program. The study further aims to examine if the predicting factors differ across the demographic variables.

Research Questions

The study formulates the following three overarching research questions to achieve its purpose:

1. What factors predict students' decision to choose an apprenticeship-based pre-diploma program?
2. Which is the most influential factor in students' decision to choose the apprenticeship-based pre-diploma program?
3. To what extent do the factors associated with students' decision to choose the apprenticeship-based pre-diploma program differ across the demographic variables?

Hypotheses

The research questions posit the following hypotheses:

1. H01: Personal interest is different across gender, ethnicity, locale, school type, and family income.
2. H02: Economic outcome is different across gender, ethnicity, locale, school type, and family income.
3. H03: Subjective norm differs across gender, ethnicity, locale, school type, and family income.

Rationale of the Study

This study identifies the predicting factors behind choosing an apprenticeship-based pre-diploma program in Nepal; moreover, their decision is also examined to determine whether more predicting factors are different across their demographic variables. That's why this study is necessary to analyze more predicting factors and their connection with their demographic variables. It is necessary to rebrand vocational education by producing skilled human capital (Omar et al., 2020). The viable predicting factors of the potential students are to be identified in order to design and launch TVET programs under the apprenticeship modality. Exploration of the predicting factors minimizes problems such as dropout, absenteeism, rumor, and mismanagement.

According to a research result by Altreiter (2021), the decision-making process for apprenticeship-based pre-diploma programs in TVET education takes into account both the educational system and the labor market context. Indicating apprenticeship as an attractive training path factor for students, Alexander et al. (2014) have stated that apprenticeship equips apprentices with useful skills and competencies in the training institutions and also in the industry or on the job market. We anticipate that the characteristics of an apprenticeship-based pre-diploma program will draw students towards it. This study aims to analyze factors that predict success, including personal interest, parental influence, advertisement, financial benefits, and future prospects. Similarly, the study aims to investigate potential differences in predicting factors across demographic variables such as gender, ethnicity, locale, school type, and family income. This study aims to analyze factors regarding the decision to choose an apprenticeship-based pre-diploma program that can be a reference to policymakers, such as TVET schools, companies, CTEVT, and TVET researchers, to identify major significant factors. This study can assist in formulating enrollment strategies, optimizing the marketing mix, and mitigating issues such as dropout, absenteeism, rumors, and mismanagement. We expect this study to contribute to the Nepali TVET field, as students' rational decision-making regarding their academic and vocational journeys plays a crucial role in the successful implementation of the apprenticeship-based pre-diploma program.

Delimitations

The apprenticeship-based pre-diploma program offers eight trades: electrical engineering, mechanical engineering, automobile engineering, hotel management,

information technology, civil engineering (building construction), early childhood development facilitation, and tea technology. However, this study treated all the trades as a single apprenticeship-based pre-diploma program. It was also delimited to the students of the first year on their decision to choose the apprenticeship-based pre-diploma program. Similarly, I restricted the study to the three predicting factors: personal interest, economic outcome, and subjective norm, along with their respective demographic variables: gender, ethnicity, locale, school type, and family income.

Organization of the Study

The study has been divided into seven chapters. In Chapter I, the study presents the research, including the study's background, problem statement, objective, research questions, and study delimitation. Chapter II reviews the related literature, policies, vocational choice theory, and research gap. It also frames the theoretical framework to integrate theory with dependent and independent variables. The research methodology section describes the philosophical underpinnings, details of the research design, sample framework, data analysis, reliability, validity, and ethical considerations. In Chapter IV, the study focuses on the demographic variables of the study participants and identifies the factors that predict students' decision to choose an apprenticeship-based pre-diploma program.

Similarly, the chapter delves into the most influential factor among the three latent factors. On the same note, chapter V assesses the differences in the determinants of the students' decision to choose the apprenticeship-based pre-diploma program, which are related to the respondents' demographic variables in this study. Chapter VI sequentially presents the major findings of the study, followed by a discussion that includes a literature review and theory. Finally, Chapter VII concludes the study with a summary, conclusion, and implications.

CHAPTER II
REVIEW OF RELATED LITERATURE

This chapter examines the relevant literature through four distinct sections: thematic review, empirical review, policy review, and theoretical review, thereby identifying a research gap. The thematic review consists of defining the apprenticeship-based pre-diploma program in practice, the apprenticeship-based pre-diploma program in Nepal, and predicting factors in students' decision to choose the apprenticeship-based pre-diploma program. The empirical review section reviews the content and methodological aspects of similar studies to this work. Similarly, the policy review section examines the policies associated with the apprenticeship-based pre-diploma program, specifically focusing on the factors that predict students' decisions. Similarly, the theoretical review employed the vocational choice theory to examine the subject matter. In the research gap section, I presented the contextual and methodological gaps in the literature.

Conceptual Dimensions of Attraction for the Apprenticeship-Based Pre-Diploma Program

This study reviewed the following conceptual dimensions to give an overview of national and international apprenticeship-based TVET program in practices and the factors that predict students decision to choose the apprenticeship-based pre-diploma program.

Apprenticeship-Based TVET Program in Practice

An apprenticeship, a method of learning by doing, has long been a part of human civilization. With its shift towards the service economy and other sectors, the industrial era required apprentices to possess both vocational and intellectual skills for continuous learning. Consequently, the concept of apprenticeship emerged, particularly in Germany during the 1980s (Fürstenau et al., 2014). A factory worker needs to stay up to date with new technologies and understand soft skills for ongoing professional growth in order to maintain their position in the field.

Dual education is work-integrated education and training in both technical or vocational institutes and employers. Many countries view this collaborative approach, where students hold dual status as both students and employees, as the cornerstone of economic development (Mongkhonvanit, 2017). A dual VET (Vocational Education

and Training) apprenticeship-based technical program is a simultaneous learning approach in vocational schools and companies. Apprenticeship is regarded as a successful model for producing gainful employment. Despite many challenges, dual training for young people has become a significant educational pathway in Germany to access the labor market that has been the backbone of the economy there (Paudel & Eberhardt, 2023). Apprenticeship is a collaborative program that involves vocational schools, workplace companies, and the governing body of TVET in Nepal, CTEVT. The program involves two learning venues: the theory portion in vocational schools and the practical work in companies. It envisions a systematic collaboration between technical schools and technical workplaces that aligns with the program's concept. According to the work contract, students dedicate 60 to 80 per cent of their course time to workplace learning (Renold et al., 2018). The program contains mostly workplace learning along with a written contract between students, employers, and vocational schools. That seems an aspiring factor for the students in their informed decision-making in program choice.

The combination of school-based knowledge and workplace learning is known as a dual system where apprentices get ample opportunity to learn professional skills in a real-world job with active guidance and supervision of the employers (Ryan, 2001, as cited in Bonoli & Wilson, 2019). Apprenticeship combines a simultaneous academic degree with vocational skills, which are believed to enhance the employability skills of apprentices, including generic, hard, and soft skills. Students have opportunities to have professional skills in the real work setting with in-company trainers that lead them toward gainful employment.

Some countries like Switzerland, Germany, and Austria are able to advocate dual apprenticeship-based pre-diploma programs in the international context (Hoeckel et al., 2010, as cited in Valiente & Scandurra, 2017). In Switzerland, vocational education and training (VET) consists of three modalities: school-based VET, apprenticeship, and uncertified apprenticeship. The apprenticeship model in Switzerland can potentially serve as a significant global model. The major reasons behind the success of the apprenticeship-based program are employers’ active engagement, their commitment to the workplace, and nominal political interference (Graf, 2014). As most of the students' learning takes place in the business industries thus, meaningful participation of the private sector and a political influence-free viable environment are the prerequisites of the apprenticeship-based TVET programs.

The apprenticeship-based program in India comprises both on-the-job and basic training; basic training is for those without institutional training, while on-the-job training is conducted within the boundaries of the employer companies. Similarly, four categories offer apprenticeship training: trade apprentices, technician (vocational) apprentices, optional trade apprentices, and graduate/technician apprentices (Gayithri et al., 2020). Though apprenticeship-based programs have high employment prospects in India, there are social and cultural barriers such as gender discrimination and mobility. Likewise, social image is inferior to academic education, discouraging many students from choosing the apprenticeship-based TVET program in India (Ravichandran, 2023). Socio-cultural factors highly influence students' program choices. To address traditional and informal occupations, Bangladesh developed a code of conduct for VET to address the informal economy with setting minimum standards in terms of training conditions, wages, and among other aspects (ILO 2022, as cited in Euler, 2023). Dual training is to be contextualize in the national context like in Bangladesh and India so that citizens embrace ownership of the TVET programs.

Many countries admire apprenticeship-based TVET programs, but their implementation, outcomes, and perceptions vary. This literature provided historical considerations and international practices for apprenticeship-based TVET programs for this study. It helped me to compare the situation of the apprenticeship-based pre-diploma program between other countries and Nepal regarding the factors that predict students' decision to choose the program.

Apprenticeship-Based Pre-Diploma Program in Nepal

The apprenticeship approach is not new for Nepal, as indigenous occupations are based on learning by doing. In TVET education, work-based or workplace learning is known by different names, such as on-the-job training (OJT), internships, and apprenticeships. Talking about Nepal's formal apprenticeship-based pre-diploma program, Butwal Technical Institute (BTI), which was established under the United Mission to Nepal (UMN) in 1963, even before the establishment of CTEVT in 1984, is a pioneer institute in conceptualizing apprenticeship and promoting the TVET sector in Nepal. Basically, BTI envisioned itself as a production-based private training institute that follows a classic apprenticeship model, awarding graduates with a government-recognized qualification. It co-opts the training facilities from its partner

companies, who also pay BTI for the services and trainees' fees, creating a costly burden (Grierson, 1989).

A Norwegian engineer, Odd Hoftun, could not find local skilled human resources for the construction of Tansen Mission Hospital. Then, he initiated the establishment of BTI as an apprenticeship training center. It has been catering to various TVET programs, including its own apprenticeship model (Butwal Training Institute, n.d.). However, Nepal initiated the accredited apprenticeship-based pre-diploma program in 2016. According to Bolli et al. (2019), the apprenticeship-based pre-diploma program in Nepal lasts for 24 months and leads to a pre-diploma level previously known as the Technical School Leaving Certificate (TSLC). Apprentices spend the first fifteen weeks in vocational schools, then five days in companies, and one day in vocational schools per week. Informal occupations and non-formal training have also incorporated apprenticeship training. The practical aspects of technical and vocational education are called on-the-job training (OJT), internships, and apprenticeships, depending on their specific nature. Specifically, technical schools and designated companies simultaneously conduct a formal program known as apprenticeship.

According to Shrestha (2021), there is a need for private sector engagement in all the phases of TVET programs in Nepal. It increases workplace-based training capacity and also gives the message that TVET is demand-driven and has high prospects. Therefore, we should incorporate the concept of private-public partnership (PPP) to enhance student employability. The private sector actively participates in formal settings through apprenticeship-based TVET programs, which are appropriate examples of PPP. A Nepali citizen who appeared for the Secondary Education Exam (SEE) and is not less than 16 years old is eligible for the apprenticeship-based pre-diploma program in Nepal. The implementation of a new course, a pre-diploma in Early Childhood Development Facilitation (ECDF), has recently occurred. According to a notice published by CTEVT in 2023, there is a free pre-diploma course in the apprenticeship-based pre-diploma program in eight trades, namely electrical engineering, mechanical engineering, automobile engineering, civil engineering (building construction), hotel management, information technology, early childhood development facilitation, and tea technology in TECS (Technical Education in Community School), partnership schools, and affiliated schools of CTEVT. The Ministry of Social Development (Education) oversees the programs in the technical

schools of Koshi, Bagmati, and Lumbini provinces, while CTEVT runs the regular programs.

Indicating the problem with apprenticeship in Nepal, Paudel and Eberhardt (2023) state that it has driven away from the traditional family-apprenticeship and embraced supply-driven modern dual TVET. Apprenticeship needs to acknowledge the informal sectors and needs to be tailored as per country context. It aims to be a role model for robust public-private partnerships for national development. The author suggested that unlike Germany, having industrial revolution for centuries, Nepal needs to contextualize apprenticeship in a national context embedded with cultural value and recognizing informal and traditional family-based occupations.

With the technical assistance of the international project, the education ministries in all provinces have expanded the trades from two in 2016 to eight by 2024. Traditionally, the trades were primarily associated with the masculine domain; however, the ECDF significantly focuses on female students. Different parts of the country offer free apprenticeship-based technical education, making it an inclusive option for economically and geographically deprived students. Therefore, the apprenticeship-based pre-diploma program is a much-needed scheme for Nepali students.

Predicting Factors of Apprenticeship-Based TVET Program Choice in Related Literature

An apprenticeship-based TVET program provides clear opportunities for learning and practice in a real-world work environment, which is likely to attract students and enhance their performance. There are ample motivating factors to attract students to the apprenticeship-based programs. Some students choose an apprenticeship-based program without any planning or calculation, while others intend to choose a secure job, thereby reaping economic benefits. Socio-cultural factors influence some students, such as family background, school environment, culture, and subcultures (Widarto, 2017). It is necessary to contextualize the factors that predict program choice in apprenticeship-based pre-diploma program in Nepal.

In Nepal, SEE graduates are eligible to participate in the apprenticeship-based pre-diploma program at no cost, with a travel expense of Rs. 100 per day. Moreover, a tripartite agreement mandates that partner industries/companies pay the students 25% of the minimum salary during their company training (Council for Technical Education and Vocational Training [CTEVT], 2022). According to Bolli et al. (2019),

the apprentice travel allowance is a significant predictor of the success of the apprenticeship-based pre-diploma program. The assumption is that the apprenticeship-based pre-diploma program attracts students with low grades and financial status

Similarly, implementing the training curriculum and work contracts received the highest scores, at 88 percent and 97 percent, respectively. This indicates that the dual VET system in Switzerland holds the highest value among other apprenticeship-based pre-diploma programs (Renold et al., 2018). The many attractive factors of the apprenticeship-based pre-diploma program indicate that students are likely to choose it first.

Safarmamad (2017) conducted a doctoral dissertation on "Factors that influence students' decision to enroll in Initial Vocational Education and Training (IVET) Lyceums in Tajikistan" among 541 samples using stratified random sampling. IVET is one of the education systems in Tajikistan that caters from short-term vocational training to three-year long-term technical education in the lyceums or schools. Students can join there either after 9th or 11th grade. It aims to produce an entry-level workforce followed by skilled human resources with dormitory facilities for needy students. The study analyzed the data using descriptive and inferential statistics such as paired t-tests, chi-square tests, and principal axis factoring (PAF). It found that males (70%) and those from rural and economically disadvantaged backgrounds (60%) predominantly selected the program. The most predictive factors for choosing IVET lyceums were parents (53%), followed by experience, siblings, job prospects, and friends, while school staff and marketing were the least influential factors. The PAF loaded 20 factors into five latent constructs: suits my needs, marketing, close people, school staff, and economic situation.

A qualitative study, "Choosing to be a craftsperson: Factors influencing career decision-making among apprenticeships," by Osuizugbo et al. (2022), has found that the influencing factors that students choose to be craftspeople in Nigeria were interest and passion, the spirit of entrepreneurship, role model, family’s socio-economic status, macroeconomic and government policies, and formal, informal, and non-formal education. It is believed that the study would provide insights to develop strategies to attract students toward apprenticeship-based construction training. This kind of apprenticeship training is believed to address labor shortages in different construction trades.

Further, a conference paper entitled "Influencing Factors of choosing modern apprenticeship-based pre-diploma programs for higher vocational college students—Taking e-commerce majors in a University as an Example" presented by Zhao and Wang (2020) collected 244 questionnaires with random sampling. They employed the logit model, framing the attracting factors as independent variables, such as gender, the attraction of the enterprise job, the enterprise salary, the support of family members, the influence of senior students, employment intention, and student cadres, with the willingness to participate in the program being the dependent variable. The study helped me construct independent variables for articulating and predicting factors in the apprenticeship-based pre-diploma program in Nepal.

Policies on Predicting Factors of the Apprenticeship-Based Pre-Diploma Program

The Education Policy (2019), section on Technical and Vocational Education and Training (TVET), outlines the conduct of apprenticeship, internship, and on-the-job training programs in partnership with private sector employer organizations (Ministry of Education, Science, and Technology [MoEST], 2019). However, the 'Apprentices' Selection, Admission, and Evaluation Guideline-2022' does not emphasize much to the private sector's involvement, except for their representative participation in apprentices' selection and evaluation (CTEVT, 2022). Until and unless employer organizations openly welcome the program, it is difficult to gain the trust of students. Moreover, the apprentices' selection and evaluation process needs to involve craftspeople's or employees' associations.

The European Union (EU) set targets for policy interventions that addressed mutual recognition of qualification among the member countries and cross-border mobility (Renold et al., 2018). The policy efforts yielded significant results in vocational training, leading to a significant shift in attitudes towards VET. However, success was not equal in the member countries (Šćepanović & Martín Artiles, 2020). It was a commendable effort in terms of funding and networking policy. Though success was not equal in the EU's member countries, such policies could bring positive change among the students and all the stakeholders. Students' motivation towards TVET programs is likely to increase when they have more options. Therefore, it is necessary to formulate viable TVET policies that address the apprenticeship-based pre-diploma program in Nepal to attract students to employable programs.

Government of India launched Skill India Mission that aims to train 400 million people by 2022. It emphasizes on promoting apprenticeship training through Pradhan Mantri Kaushal Vikas Yojana (PMKVY) and Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDUGKY). PMKVY is a flagship scheme that provides financial assistance for skills and certificate to the individuals. It also focuses on apprentices' training in different trades and sectors (Ravichandran, 2023). There is a funding mechanism in India that seems a sustainable practice to expand apprenticeship training and provide gainful employment to the people of India.

In the sixteenth plan (2024/25-2028/29) of Nepal, the third strategy advocates work-based training in coordination with the private sector. It also highlights the need for demand- and technology-based training, capacitated technical institutions, entrepreneurship-oriented vocational training, and a public-private partnership model for TVET development. Likewise, in the major program section, the second point states the priority for workplace-based training with an earning while learning approach (Government of Nepal, National Planning Commission, 2024). The sixteenth periodic plan appears to have prioritized the apprenticeship-based TVET program in both its major program and strategies. It also highlights the private sector engagement in the program as they are major employers in Nepal.

Industries are not properly clear about the implementation system of the apprenticeship-based pre-diploma program. Previously, the industries used to understand that industries could not retain trainees for more than a year, which was incompatible with the apprenticeship-based pre-diploma program's 20-month enterprise-based training. According to the Labor Act (2017), 16(1), “Any enterprise may, by making an agreement with any educational institute, employ any person as an apprentice following the approved curriculum of such an institute” (Law Commission., 2017, p. 9). The statement speaks about differences between trainees and apprentices, and it is very important to convince students and businesses/industries to participate in the apprenticeship-based pre-diploma program in Nepal.

The Swiss Cooperation Program Nepal 2023-26 emphasizes the positive aspects of the dual VET apprenticeship-based pre-diploma program. The government has allocated funds for the program, and employers are actively involved in the apprentice selection process and ready to provide allowances to the apprentices. There is a need for regulatory mechanisms to maintain similar quality in all institutions. In

the future, it is important to assist the government in institutionalization and ensuring the quality of TVET programs in Nepal (Swiss Agency for Development and Cooperation, SDC, 2022). In this way, the Swiss Cooperation Program has prioritized systemic change for the sustainable and rewarding implementation of the apprenticeship-based pre-diploma program in Nepal.

Predicting Factors of Students' Decision to Choose the Apprenticeship-Based Pre-Diploma Program: Theoretical Underpinning

The study on the factors of students' decision to enroll in an apprenticeship-based pre-diploma program is observed through the lens of Ginzberg's vocational choice theory as it talks about the predicting factors in choosing a vocational program.

Vocational Choice Theory

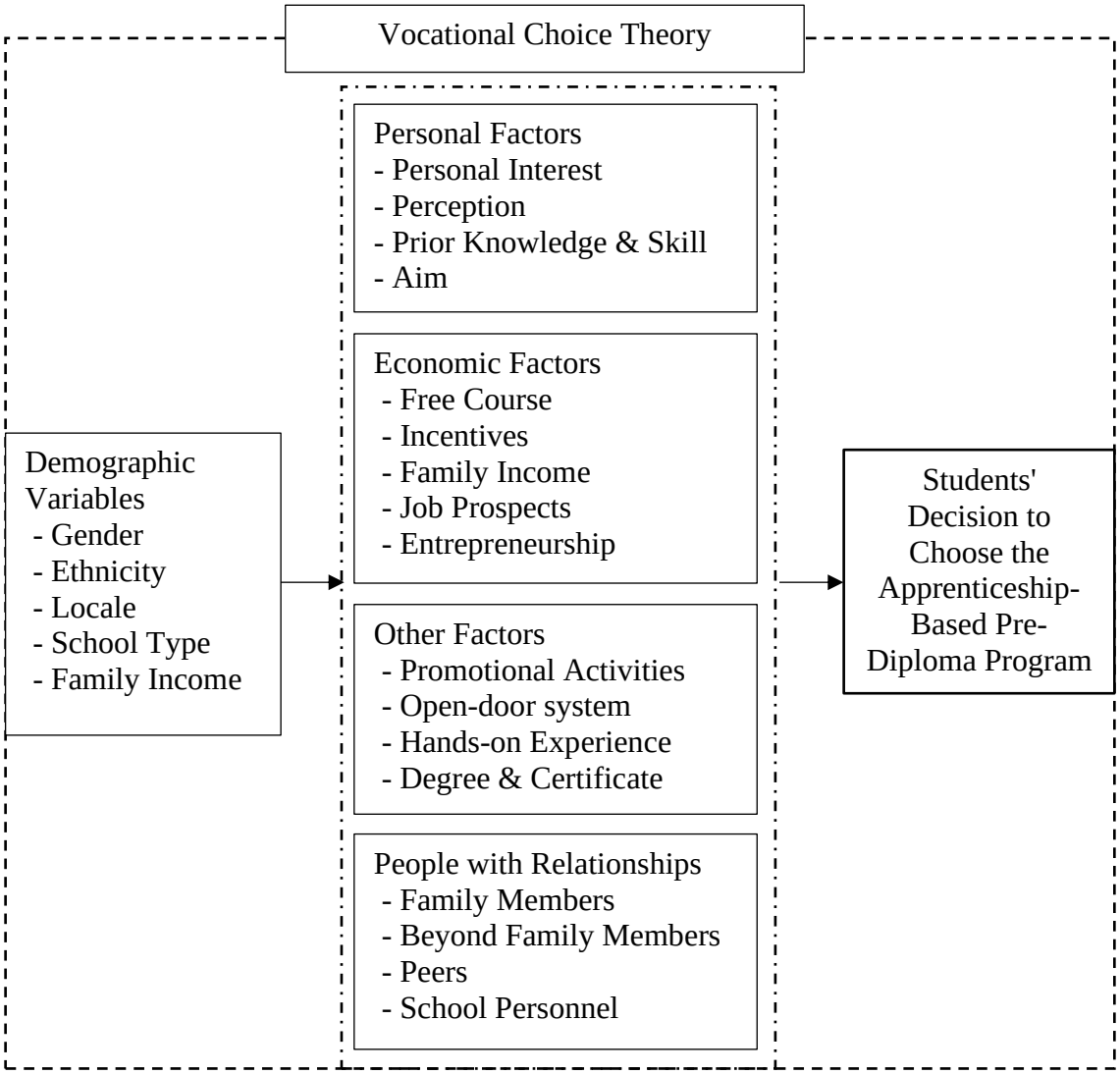
Vocational choice theory highlights individual, economic, and socio-cultural factors that influence people to choose a vocation. Some individuals choose their vocation due to compulsion. In contrast, others base their decision on factors such as income and benefits, and some are influenced by socio-cultural factors such as their school environment, family background, culture, and subcultures (Widarto, 2017). According to the vocational choice theory, SEE students have the option to pursue further academic journeys in either general or technical and vocational streams. In Technical and Vocational Education and Training (TVET), students have the option to select a pre-diploma course under an apprenticeship-based pre-diploma program driven by compulsion, economic benefits, and socio-cultural factors.

Ginzberg (1988) asserts that compromise and individual's interest determine the choice. Some students may compromise a vocation due to a lack of options; likewise, some weigh their interests and capacities with opportunities and limitations, economic outcomes, and employment prospects. Parents, friends, teachers, and other influential people also influence their choice of vocation. The theory aligns with my research as various circumstances may force potential students in different countries to make compromises when choosing an apprenticeship-based pre-diploma program. Likewise, they are likely to choose the program in terms of their interests and capacities, as the apprenticeship-based pre-diploma program is mostly manual work. At the same time, they are likely to perceive the program through the lens of its potential economic benefits and employment opportunities.

Based on the theory, a theoretical framework is presented as below:

Figure 1

The Theoretical Framework of the Study



(Ginzberg, 1988; Safarmamad, 2017; Zhao & Wang, 2020)

The vocational choice theory describes that students may choose vocational courses based on their interests and socio-cultural background or seek economic or other benefits. Similarly, I examine the predicting factors to determine their association with the students' decision to choose an apprenticeship-based pre-diploma program, considering demographic variables such as gender, ethnicity, locale, school type, and family income. The vocational choice theory bounds demographic variables, dependent variables, and their path toward students' decision to choose the apprenticeship-based pre-diploma program.

Research Gap

The above literature highlights the importance and features of apprenticeship-based pre-diploma programs in different contexts. Bolli et al. (2019) have examined the program's scale-up prospects in other parts of Nepal, along with the highlights of its features and facilities. Similarly, Renold et al. (2018) found that the training curriculum and work contracts received the highest ratings, making the Dual VET Apprenticeship the most valuable program among all apprenticeship-based pre-diploma programs in Switzerland. Business industries spearhead apprenticeships and regularly update their training curriculum, a commendable practice. However, Nepal still lacks this practice. Similarly, a policy mandates the conduct of apprenticeship, internship, and on-the-job training programs in partnership with private-sector employer organizations (MoEST, 2019). However, except for a few, private-sector employer associations remain uncommitted to the apprenticeship-based pre-diploma program, which negatively impacts students' interest in it.

Zhao and Wang (2020) have discussed 11 independent variables that influence the selection of a modern apprenticeship-based pre-diploma program within the e-commerce field of higher education. Safarmamad (2017) has further explored the attractive factors in the initial TVET program. The studies primarily concentrated on the existing features and facilities and the factors that attract students to TVET programs. The previous studies did not thoroughly analyze the factors that influence students to enroll in apprenticeship-based TVET programs at the pre-diploma level. Likewise, this study focuses on whether the predicting factors differ across their demographic variables — gender, ethnicity, locale, school type, and family income. This study needs to identify the significant predictor factor for students' enrollment in the apprenticeship-based pre-diploma program in Nepal.

In terms of methodology, Osuizugbo et al. (2022) have used a qualitative research method to identify the influencing factors. In this context, my research employs a survey method, utilizing six Likert scales, to identify the independent predicting factors that influence students' decision to choose the apprenticeship-based pre-diploma program as the dependent variable. Very few studies have been conducted on the relationship between the apprenticeship-based pre-diploma program and students' decision to choose it in Nepal. The study examines the factors that predict students' decision to choose an apprenticeship-based pre-diploma program. Similarly, it examines the factors associated with students' decision to choose an

apprenticeship-based pre-diploma program in terms of their demographic variables, such as gender, ethnicity, locale, school type, and family income. I anticipate this study will bridge the content and methodological gaps in the previously mentioned literature.

Chapter Summary

There are various factors predicting students' decision to choose the apprenticeship-based pre-diploma program. Very few working papers are available on the apprenticeship-based pre-diploma program, and I could not locate any research on the factors that influence students' decision to choose the program in Nepal. I delved into the international practices of TVET programs with very few apprenticeship-based programs, followed by examining the factors influencing program choice and conducting a policy review. Similarly, I observed the determinants through the lens of vocational choice theory, framing the study around factors such as personal interest, economic factors, other factors, and individuals with relationships. Lastly, I filled in the policy, practice, and methodological gaps in the literature above, identifying them as research gaps.

CHAPTER III
METHODOLOGY

In this chapter, I explained the methodological procedures of my research journey. This study begins with research paradigms drawn from philosophical considerations. Next, I explained the survey method in the research design section. Then, I drew a sample size from a population within a research site. After that, I calculated the sample size based on the sample frame using Cochran's formula. I discussed various data collection tools and techniques and various statistical analyses relevant to the research questions. Then, I discussed the reliability and validity of the survey. Finally, I addressed the ethical considerations that arise during the data collection process.

Philosophical Considerations

The research method is based on philosophical considerations that guide the researchers to make decisions through ontological, epistemological, and axiological worldviews (Peel, 2020). The paradigm, which guides the research activity with its beliefs about the nature of reality, the theory of knowledge, and the acquisition of knowledge, determines the research methodology (Tuli, 2011). Since there is no universal truth, I have adopted the post-positivist paradigm, which employs various instruments and aims to explore phenomena as clearly and closely as possible (Panhwar et al., 2017). The foundation of research design is based on four terminologies: ontology, epistemology, axiology, and methodology (Assalahi, 2015).

The ontology of the study is objective in nature and external to the researcher. Certain universal meanings in selecting a training program differ, as each respondent has their unique reasons for doing so. Nevertheless, some well-agreed reasons exist for selecting the apprenticeship-based pre-diploma program. Therefore, I considered both the respondents' universal and contextual meanings (Bhattarai, 2015). Different predicting factors in students' decision to choose the apprenticeship-based pre-diploma program can be viewed from their objective reality. Therefore, my study was based on the objective answers provided by the respondents.

The epistemological position of my study was the result of the survey among respondents of the apprenticeship-based pre-diploma program (Ramiz, 2016). As of my axiology, I conducted a deductive exploration of the influencing factors in the

selection of the apprenticeship-based pre-diploma program, ensuring that I remained independent of their values (Paudel, 2024). The study aligned with empirical approaches and objectivity. The study employed a value-free approach, and I influenced neither the research process nor the results. The research questions in this study necessitated a survey approach, as surveys typically yield quantitative or numerical descriptions of the study population (Fowler Jr., 2009). I applied the survey-related research methodology to the factor analysis of the respondents' data. In this study, I conducted data analysis of the variables using applicable statistical tools, following the survey method and the related research methodology.

Research Design

Research design comprises a plan for data collection, analysis, and control of the external influences procedure (Flick, 2011). I adopted a quantitative approach for this study that is guided by the post-positivist research paradigm. The post-positivist researcher believes in objective reality and that the value of independence is free. Likewise, the tendency of the researcher is either to reject or fail to reject a hypothesis that I have tested hypotheses in this study (Creswell & Clark, 2017). I used the survey as a research design under the post-positivist research paradigm because there is an objective reality for the predicting factors of the students' decision to choose the apprenticeship-based pre-diploma program in Nepal.

Study Site and Population

The population for the study is the students of a 24-month apprenticeship-based pre-diploma program in eight trades in Koshi Province (Province 1). According to the data of CTEVT, the program has been conducted in three provinces - Koshi, Bagmati, and Lumbini with 1445 students. Among them, 594 students are in Koshi, 457 are in Bagmati, and 444 are in Lumbini province. Similarly, there are seven trades/occupations in both Bagmati and Lumbini provinces, whereas all eight trades are in Koshi province. There are the highest numbers of students and trades, so Koshi province was selected as a research site for my study.

The population in program in 2023/24 of Koshi province is as follows:

Table 1

Number of Students in Apprenticeship-based pre-diploma program in Koshi Province

S. No.	Name of the Schools	Male	Female	Total
1.	School 1	19	41	60
2.	School 2	8	11	19
3.	School 3	33	25	58
4.	School 4	46	11	57
5.	School 5	67	13	80
6.	School 6	9	51	60
7.	School 7	19	21	40
8.	School 8	22	8	30
9.	School 9	15	25	40
10.	School 10	16	24	40
11.	School 11	12	18	30
12.	School 12	10	50	60
13.	School 13	11	9	20
	Total Students	287	307	594

In the above table, among 594 students of the apprenticeship-based pre-diploma program in the 13 technical schools - constituent, partnership, and Technical Education in Community School (TECS) of CTEVT, there are 287 male and 307 female students. Likewise, among the 594 students in Koshi Province, a minimum of 19 to a maximum of 80 students are in the 13 technical schools.

Sample and Sampling Technique

The sample size is identical as I got the students' records from the concerned departments of the apprenticeship-based pre-diploma program. The sample frame of Koshi Province was derived to assess the individual elements of the population under this study (Schofield, 2006). For this study, the sample size has been calculated using Cochran's formula as follows:

$$n = \frac{\frac{Z^2 * p\,(1 - p)}{e^2}}{1 + \frac{Z^2 * p\,(1 - p)}{N\,e^2}}$$

Where n = Sample size; Z = Critical value of confidence level (1.96 at 95%); p = Probability of variation (.5); e = Margin of error (.05); and N = Population size (Adhikari, 2021). For the population of 594, the sample size calculation is as follows:

$$n = \frac{\frac{(1.96)^2 * .5\ (1 - .5)}{(.05)^2}}{1 + \frac{(1.96)^2 * .5\ (1 - .5)}{594\ (.05)^2}}$$

As per the formula, at a 95% confidence level and 5% margin of error, 234 students were selected as the sample size for this study. My sample size is fair, as about 200 samples are fair, and 300 are good; some suggest a minimum of 150 and 200 cases in total (Tabachnick & Fidell, 2013, as cited in Cohen et al., 2018). There is a condition when a certain number of factors is expected, and the required sample size is likelier than a fully exploratory approach (Lorenzo-Seva & Ferrando, 2024). In my research, personal interest and economic outcome were already expected; thus, the 234-sample size is appropriate for running the exploratory factor analysis. I adopted the proportionate random sampling method.

Each school's population was divided by the total number of students, i.e., 594. Then, sample size 234 was multiplied by the percentage of total sampling. The sampling frame is as follows:

Table 2

Sampling Frame

Name of the Schools	Population (N)	Percentage of Total Population	Proportionate Sample Size (n)
School 1	60	10.10	24
School 2	19	3.20	7
School 3	58	9.76	23
School 4	57	9.60	22
School 5	80	13.47	32
School 6	60	10.10	24
School 7	40	6.73	16
School 8	30	5.05	12
School 9	40	6.73	16

School 10	40	6.73	16
School 11	30	5.05	12
School 12	60	10.10	24
School 13	20	3.37	8
Total Students	594	100.00	234

In the above table, the population is the total number of students in the respective schools. In contrast, the percentage of the total population was calculated by dividing the number of students in each school by the total number of students (N), i.e., 594. Likewise, proportionate sample size (n) is a product of the percentage of total sample and total sample size, i.e., 234.

I used a proportionate random sampling technique with a lottery method to select the sample students. The number of students was different in the schools, i.e., from 19 to 80 in terms of the number of trades and allotment. Thus, proportionate random sampling was required. Adding 10% of the sample, I needed around 50% of students in each school, i.e., 27 out of 60 students, as when the number of cases is smaller the population, the larger the proportion of that population appears in the sample (Krejcie & Morgan, 1970, as cited in Cohen et al., 2018). Before I selected the students, I had arranged the students in terms of their gender to select an equal proportion of male and female students. As the sampling frame, I had to pick one out of two samples, either serial number 1 or 2. In this way, I had to go with either odd serial numbers or even. For that purpose, I did a coin toss. When I got the head side, I regarded it as number 1, meaning that students in the odd numbers of the list would be selected from that particular school. Similarly, upon the tail side, students in the even numbers of the list were selected as the sample. I highlighted the specific names of the students as the research sample accordingly.

Scale Construction

A survey questionnaire was developed for this study based on the factors identified by three pieces of literature - Safarmamad, Zhao and Wang, and Ginzberg. Studying literature and compiling questionnaires on related factors were the initial steps. Nevertheless, the main idea for constructing the scale was from Farid Safarmamad's doctoral dissertation "Factors that Influence Students' Decisions to Enroll in Initial Vocational Education and Training (IVET) Lyceums in Tajikistan" (Annex I) from Old Dominion University. I emailed Mr. Safarmamad on February 11,

2023, for his consent to use his questionnaire (Annex II). Then he sent me the email back stating that he had no problem in giving me consent, but he also mentioned that he had adapted the survey questionnaire from another author, Dr. David Gaunt, and told me if I needed to have Dr. Gaunt's consent too. I tried to contact Dr. Gaunt as much as possible, but I did not get a response from the email address that I had. Actually, I needed to change the whole questionnaire format, so I picked just an idea of possible factors from the dissertation. Mr. Safarmamad got the four factors- program interest, school staff, people with close relationships, and program marketing- when choosing the IVET program.

As the next step, I started contextualizing the factors and questionnaire to link my study to the setting of the previous study (Shehadeh, 2020). Based on these factors, I consulted with the apprenticeship students, instructors, and employers as the experts to construct the scale. So, I started a conversation with two apprenticeship-based pre-diploma program instructors on July 11, 2023, and August 13, 2023, respectively, where I got factors like foreign employment, certificate, job prospects, incentives, utilization of leisure time, experiencing new programs, and acknowledgment to the disadvantaged group as the influencing factors of the apprenticeship-based pre-diploma program in Nepal.

Upon the suggestions from an instructor, I had a virtual group meeting with eight students of the apprenticeship-based pre-diploma program from Koshi Province on August 15, 2023. That time, the students were in scattered places for their workplace learning and they were busy the whole day. Hence, as initial exploration, I conducted the virtual meeting with the apprentices of the province in presence of the instructor. Likewise, I conducted a physical group meeting with 11 students in Kathmandu where I got factors like suggestions from teachers and relatives, proximity, friends' influence, experiencing real work, incentives, foreign employment, entrepreneurship, information from social media, extra skill from theoretical knowledge, no age bar, and opportunity for weak and dropouts. I called two employers on August 16, 2023, but they told me that students would join the apprenticeship-based pre-diploma program since it was free, earning with learning, prospects, and due to school notice. They also told me to ask the school instructors to extract better-predicting factors. My experts were the apprenticeship-based pre-diploma program's students and the instructors, and I also got proper information

from them; thus, I considered the program's students and instructors as my experts accordingly.

As a further step, I contextualized the literature and settings of Ginzberg (1988), Safarmamad (2017), and Zhao and Wang (2020) to construct the scale for the predicting factors of the students' decision to choose the apprenticeship-based pre-diploma program. Zhao and Wang identified the influencing factors against willingness to join modern apprenticeship-based pre-diploma programs, they were gender, enterprise job attraction, enterprise salary, family members' support, influence of senior students, employment intention, and student cadres. Likewise, in the vocational choice theory, Ginzberg specified the factors that influence choosing a vocational program, such as personal interest - planned or unplanned, prospects with economic benefit, people with relation, and source of information.

After consulting with the experts about the factors and related items and the references from those three studies, I came up with five factors: personal interest factors, economic factors, non-economic factors, people with relationships, and prospects of the program with 43 items. The contextual factors of the relevant literature and the study settings enabled my study and its findings to be credible, generalizable, and verifiable (Shehadeh, 2020). A good understanding of respective theories and literature can help construct attributes in the scale (Yusoff et al., 2021). I adopted Ginzberg's vocational choice theory, which states the various factors influencing people to choose the vocational trades. Likewise, I reviewed literature related to the factors that predict students' choice of apprenticeship-based TVET programs.

Then, in the next step, I developed a questionnaire of 48 questions with an item analysis approach using a semantic scale response format, i.e., either the right or wrong option for each item (Yusoff et al., 2021) (Annex – III). To get data from my research site, Koshi province, I prepared the questionnaire using Google Sheets. I sent it to two technical schools of Koshi province, one affiliated and one partner school, along with request emails. I got 61 responses, 56 of which were students and 5 instructors from 5 trades: Information Technology, Early Childhood Development Facilitation, Electrical Engineering, Automobile Engineering, and Civil Engineering. From the Google sheet report, I calculated the percentage of responses. I retained those responses with scores of 70 and more percent and those I thought would have been important despite the scores being a little below 70 percent. In this way, I came

up with 39 questions I converted the response options to the six Likert scale having positive responses, i.e., 6 = strongly agreed, 5 = mostly agreed, 4 = reasonably agreed, 3 = somewhat agreed, 2 = fairly agreed, and 1 = least agreed. I also included demographic items for the pilot testing (Annex IV).

To attain face validity, data entry preparation, administrative process, and descriptive statistics, I conducted a pilot testing as one of the major steps with 24 representative students/approximately 10 percent of the sample (Yusoff et al., 2021). Since the respondents of the pilot study should not be repeated in the final data collection, I had to do pilot study in Kathmandu valley and near by the valley where I could travel and meet the students even in their workplaces. Moreover, the apprentices from Koshi province were also in the field-based study then, so it was tough to meet them. I visited one technical school in Kavrepalanchowk district where the coordinator summoned seven students. I directly observed and clarified where they were confused, which I noted too. Then, I went to another technical school in the Kathmandu district, where I was able to get the questionnaire filled out by only two students. As per the coordinator's suggestion, I went to a hotel the next day where some students were working as apprentices. I found five students there; I noticed some places where students were confused. Similarly, a technical instructor sent me 10 responses from the Koshi province upon my request.

I framed the questionnaire to 37 items from my observation and the pilot study. In this way, I contextualized the factors and appropriate scale as per the suggestions from the experts of the apprenticeship-based pre-diploma program in Nepal. Finally, I prepared these items in Nepali and English language. I got a Nepali language correction from a Nepali teacher. Similarly, I got an English language checked from the Writing and Communication Center (WCC) of Kathmandu University School of Education (KUSOED). In this way, I finalized the questionnaire. I also got a recommendation letter for my research from the Department of Development Education that I sent to all 13 technical schools and made follow-up calls accordingly.

Tools and Techniques of Data Collection

I used the survey questionnaire to collect the data. For this purpose, I sourced references for factors and questionnaires from the works of Safarmamad (2017), Zhao and Wang (2020), and Ginzberg's vocational choice theory. With reference to the literature and theory, I contextualized and constructed a survey tool along with the

experts. After item analysis and a pilot study, I prepared a survey tool. I constructed the tool in two parts, the first part containing the respondents' demographic data, and the second part containing the main survey questions in six Likert scales. I prepared it in word and pdf formats.

I sent the questionnaire and the sample frame via email to one of the main persons involved in the project. I had multiple rounds of telephone conversations regarding data collection techniques. Unfortunately, he could not get the data collected as per our schedule because of the improper system of students' attendance at schools and a lack of time, as there was only one week left before Dashain vacation. As per his request, I postponed the data collection after the festive vacation, as a new batch would be started and it would be much easier to collect data because the students would spend their first three and a half months in the technical schools.

Since my pilot study and scale construction, two MTVET students have supported data collection arrangements and have committed to serving as enumerators for my research. They serve as technical instructors at the two research schools in Koshi province, thereby reducing the need for extensive instruction from me. After getting a new students' list for 2023, I contacted them. I luckily met both on November 5, 2023, at KUSOED. I shared the sample frame along with the list of the marked students. I let them complete the dummy survey questionnaire and discussed it in detail. I instructed them about the sampling frame and the technique of proportionate random sampling. I told them to fill out the questionnaire in person with the designated students and to get the consent forms from the respective schools. Then, we had a follow-up meeting virtually to start data collection. On January 19, 2024, I sent emails containing a recommendation letter from Kathmandu University School of Education (KUSOED), highlighted student names, and requested consent for data collection from all technical schools. I also made follow-up calls to the contact persons of the respective schools. So, my enumerators also contacted the contact persons for the appointments to collect data.

They started data collection on January 22, 2024. After collecting data from one school at a time, they sent me some scan data. I observed that all the data were accurately filled in. During our online meeting, they discussed the absenteeism issues the designated sample students faced. In such a case, I told them to collect the remaining data from the present students if it was impossible, even on their third visit. In the interim, I regularly received updates from the respective schools regarding the

data collection process. I learned that both enumerators had physically visited their schools and collected survey responses from specific students. Initially, they dispatched 128 data sets from the seven schools via air cargo on February 2, 2024. A few data points were missing, and some options were carelessly checked. Therefore, we convened a virtual meeting to address these issues. The remaining data collection took longer than expected due to the remote locations of the remaining schools. In the interim, they dispatched an additional air cargo containing 95 data points from four schools on February 12, 2024. All the data included student names, which helped me tally the names and their details from the sample frame. In this way, they wrapped up the data collection on March 1, 2024, and sent me 32 data points from the remaining two schools. In total, they collected 255 data points from the 13 technical schools. I developed a database, and coded, and screened the data for quality assurance. I found two missing data, and 13 were outliers. In this way, 240 data points were considered for the analysis.

Data Analysis

In this research, I utilized both descriptive and inferential statistics to analyze the survey data using the SPSS 25 version. Based on the research questions, I analyzed the survey data. The first research question identified the factors predicting students' decisions to choose an apprenticeship-based pre-diploma program. I used an exploratory factor analysis (EFA) statistical tool for this. EFA was used to regroup the many observed variables into a limited set. This approach aided me in narrowing down the number of variables that could effectively explain the structure and categorize them into significant factors (Sürücü et al., 2022). The Exploratory Factor Analysis (EFA) examined specific factors derived from the contextualized questionnaire to identify factors that could predict students' decision to enroll in an apprenticeship-based pre-diploma program in Nepal. For the second research question, I analyzed the percentage of variances of each factor obtained as an EFA output. Given the scarcity of studies on apprenticeship-based pre-diploma programs in Nepal, it was crucial to investigate the factors influencing program selection. Therefore, I utilized EFA to pinpoint the specific factors in this context.

Finally, the third question was to check for any differences in the factors associated with students' decision to choose the apprenticeship-based pre-diploma program across the demographic variables: gender, ethnicity, locale, school type, and family income. I used a one-sample t-test for the demographic variables of gender (recoded

into two groups), a one-sample t-test for the students' locale, and an ANOVA for the variables with more than two groups, such as ethnicity and family income. Table 3 below displays the research questions and their corresponding statistical tools:

Table 3

Research Questions and Related Statistical Tools

Q. No.	Research Questions	Statistical Tools
1	What factors predict students' decision to choose the apprenticeship-based pre-diploma program?	Exploratory Factor Analysis (EFA)
2	Which is the most influential factor in attracting students toward the apprenticeship-based pre-diploma program?	Percentage of variance from Principal Component Analysis (PCA)
3	To what extent do the factors associated with students' decision to choose the program differ across the demographic variables?	Inferential statistics — *t*-Test and ANOVA

Reliability and Validity Test

The quality of the research is assured with reliability and validity tests in the quantitative research. Reliability refers to stability, which is the internal consistency of the instruments over time and repeated test administration (Creswell & Creswell, 2018). To ensure reliability, I used the Cronbach alpha test for internal consistency of the scales with pilot testing by my in-person presence. I calculated Cronbach alpha and got an overall alpha value of 0.82. The result of the Cronbach's alpha coefficient test of the factors is presented in the table below:

Table 4

Cronbach's Alpha Test

Dimensions	Items	Cronbach's Alpha Coefficient
Personal Interest	5	0.63
Economic Benefit	5	0.71
Other Benefits	5	0.72
Source of Information	7	0.77
Prospects of Program	12	0.76

In Table 4, except for personal interest 0.63, economic benefit, other benefits, source of information, and program prospects have Cronbach alpha coefficient above 0.70. Cronbach alpha coefficient value from 0.70 - 0.79 is reliable, and from 0.60 - 0.69 is marginally reliable (Cohen et al., 2018). Thus, the reliability was acceptable for all the factors.

Similar to the reliability, I checked the validity of my questionnaire to see whether they reflected my research questions' answers. Validity generally refers to ensuring the adequacy of a survey or tools and whether the measuring instrument measures its intended purpose (Gaur & Gaur, 2009; Wolf et al., 2019). I tested content, construct, and criterion validity among different types of validity. Content validity ensures that all the intended contents are covered (Cohen et al., 2018). For that, I reviewed the related literature and vocational choice theory to identify the predicting factors of students' attraction to apprenticeship-related technical and vocational programs.

Moreover, I consulted with experts - apprenticeship students, instructors, and employers to validate the questionnaire. Likewise, construct validity refers to whether the measurement is hypothetical or conceptual (Creswell & Creswell, 2018). For construct validity, I took reference to the questionnaire and factors from Safarmamad (2017), Zhao and Wang (2020) and the theory of Ginzberg (1988) developing the survey tools. I also analyzed items with the apprenticeship students and their instructors and consulted with the experts to construct the tool. Likewise, to meet criterion validity, I compared and contrasted my study results with similar kind of other studies (Osuizugbo et al., 2022; Safarmamad, 2017; Zhao & Wang, 2020) as criterion validity compares or relates the results of a particular instrument to other similar external criterion (Cohen et al., 2018). Those results suggested personal factors, economic benefits, non-economic benefits, people with relations, and prospects as the predicting factors of students' decision to choose the apprenticeship-based pre-diploma program. Thus, it ensured the criterion validity for this study.

Ethical Considerations

Before data collection, the researcher is expected to consider specific ethical considerations related to respondents' rights and consent and make technical decisions (Jehle, 2020). For that, I obtained prior consent from the head teachers of the technical schools and the respondents. I sent emails with a recommendation letter from KUSOED (Annex V) to use enumerators to collect data. I also made calls to the

respective head teachers. Later, my two enumerators also contacted them physically. Where the respondents are below 18, I obtained consent from the head teachers. The respondents' and technical schools' identities and personal matters were kept confidential during and after the survey. The option was provided to the respondents that they could respond to the questionnaire or quite any part of the questionnaire or the whole research anytime in the consent form. Respondents were not provided any kind of benefits for the survey. The data would be used only for academic purposes. My enumerators collected data with no harm or risk to the respondents as they are also master's students of technical and vocational education. Similarly, this study would not be used mainly for any organization. Likewise, I already submitted the ethical guidelines of KUSOED and received a recommendation letter accordingly.

Chapter Summary

This chapter started with philosophical considerations with objectivist ontology and empiricist epistemology, guided by post-positivism. This quantitative methodology adopted a cross-sectional survey method. From the population of 594, the sample frame calculated 234 sample students. Then, this chapter discussed on the processes used for scale construction. Likewise, the data analysis process was discussed through statistical tools and software. Then, the pilot study and Cronbach's alpha were tested for reliability assurance. I also ensured the construct, content, and criterion validity of this study. This chapter ends with the ethical considerations of the study.

CHAPTER IV
FACTORS PREDICTING STUDENTS' DECISION TO CHOOSE THE APPRENTICESHIP-BASED PRE-DIPLOMA PROGRAM

The chapter starts by describing the demographic variables of the sample students of the apprenticeship-based pre-diploma program in Koshi province, such as gender, ethnicity, locale, school type, and family income. This chapter also explores the predictors of the students' decision to choose the apprenticeship-based pre-diploma program in Nepal through Exploratory Factor Analysis (EFA). From EFA, 10 items under three predicting factors of students' decision to choose the apprenticeship-based pre-diploma program are explored. Then, the chapter explains naming the explored factors and checks the factors' internal consistency. Lastly, the chapter identifies the factors that influence students' decision to choose the apprenticeship-based pre-diploma program.

Demographic Variables of Students of the Apprenticeship-Based Pre-Diploma Program

This section of the study provides the demographic variables of the respondents. The respondents of this study were first-year students of the 13 technical schools of Koshi Province. At first, respondents' background variables like gender, ethnicity, locale, school type, and family income are presented. Then, their background information on related training, experience, continued study, and influence of friends, family members, and neighbors are presented. Finally, the section presents the apprenticeship trades and the respondents' allocation in the technical schools of the research site.

Table 5

School Wise Number of Respondents

Name of the Schools	No. of Students	Required Sample	Valid Collected Data	Male	Female
School 1	60	24	26	10	16
School 2	19	7	8	5	3
School 3	58	23	22	12	10
School 4	57	22	20	11	9

School 5	80	32	30	18	12
School 6	60	24	25	5	20
School 7	40	16	15	6	9
School 8	30	12	10	5	5
School 9	40	16	16	8	8
School 10	40	16	20	8	12
School 11	30	12	12	5	7
School 12	60	24	26	8	18
School 13	20	8	10	6	4
Total Students	594	234	240	107	133

Table 5 is a school-wise list of the respondents who collected data from the 13 technical schools of Koshi province. Though the required sample size was 234, I got the data collected from 255 (10% more) respondents considering missing values. Among 255 collected data, 13 respondents (26, 31, 50, 51, 67, 71, 157, 162, 195, 196, 198, 200, and 213) were outliers, and there were missing data in two data (136 and 141). Thus, 240 data from the respondents were finalized for the interpretation. Data was collected based on proportionate random sampling with a lottery method.

Demography of the Respondents

The study's respondents were first-year students of the 13 technical schools under CTEVT. Respondents' gender, ethnicity, locale, school type, and family income are presented here as demographic variables. Gender was categorized into three attributes - male, female, and others; later, it was recoded to male and female due to zero respondents in the others category. Likewise, ethnicity was categorized into five major groups - Brahmin, Chhetri, Ethnic/Janajati, Dalit, and Others, as major disaggregation by CBS (Sharma, 2019). Regarding Locale, respondents' types of municipality and their region were presented. The frequency and percentage of the demographic variables are given below in Table 6.

Table 6

Respondents' Gender, Ethnicity, and Locale

Category of Variables	Frequency	Percent
Gender		
Male	107	44.6
Female	133	55.4
Others	0	0
Ethnicity		
Brahmin	26	10.8
Chhetri	15	6.3
Ethnic	108	45.0
Dalit	55	22.9
Others	36	15.0
Locale		
Municipality		
Metropolitan City	17	7.1
Sub-metropolitan City	7	2.9
Municipality	95	39.6
Rural Municipality	121	50.4
Region		
Rural	195	81.3
Urban	45	18.7

Table 6 presents that the numbers of females in the apprenticeship-based pre-diploma program were 133 (55.4%) and male were 107 (44.6%). It shows that female participation in technical education under the apprenticeship-based pre-diploma program in Koshi province is higher than male participation.

Regarding another demographic variable, ethnicity, the majority of the respondents were Ethnic/Janajati (45%), followed by Dalit (22.9%), Others (15%), Brahmin (10.8%), and Chhetri (6.3%). Technical education based on the apprenticeship-based pre-diploma program is preferred by Ethnic/Janajati and Dalit students over that of Brahmin and Chhetri students.

In terms of types of municipalities, half of the respondents (50.4%) were from rural municipalities, followed by municipality (39.6%), metropolitan (7.1%), and sub-

metropolitan cities (2.9%). Categorizing their region based on rural and urban, it was found that respondents from rural areas were very higher (81.3%) than from urban (18.7%).

Respondents' Academic Information

The respondents of the students were SEE/SLC graduates, and they came from public and private schools. The apprenticeship-based pre-diploma program in technical subjects is being conducted in three kinds of technical schools under CTEVT, i.e., constituent schools of CTEVT, partnership schools with CTEVT, and community TECS (Technical Education in Community School), respectively, shown in the following table.

Table 7

Respondents Previous School Type and Current Technical School Type

Category of Variables	Frequency	Percent
Prior School Type		
Public School	188	78.3
Private School	52	21.7
Current Technical School Type		
Constituent	17	7.1
Partnership	177	73.8
Community TECS	46	19.2

Table 7 shows that the academic background of 188 students (78.3%) was from public schools and 52 (21.7%) were from private schools. This means most of the students in the technical courses under the apprenticeship-based pre-diploma program came from public schools.

Regarding the type of technical schools, 73.8% of respondents were in the nine partnership modality schools of CTEVT, 19.2% in the three TECS modality schools, and 7.1% in the one constituent school of CTEVT, respectively.

The apprenticeship-based pre-diploma program has been operated in eight trades/occupations since 2023, and trades/occupations are being conducted in Koshi province as follows:

Table 8

Respondents Trades/Occupations in Apprenticeship-Based Pre-Diploma Program

Trades/Occupations	Frequency	Percent
Electrical Engineering	28	11.7
Mechanical Engineering	19	7.9
Civil Engineering	51	21.3
Automobile Engineering	18	7.5
Hotel Management	29	12.1
Information Technology	50	20.8
Early Childhood Development Facilitation	29	12.1
Tea Technology	16	6.7
Total	240	100.0

Table 8 portrays the eight trades/occupations in Koshi province; the highest number of respondents (21.3%) were in civil engineering (in six schools), followed by information technology (20.8%, in five schools), hotel management (in two schools) and early childhood development facilitation (in three schools) at equal of 12.1%, electrical engineering (11.7%, in two schools), mechanical engineering (7.9%, in one school), automobile engineering (7.5%, one school), and tea technology (6.7%, in one school) respectively.

Respondents Annual Family Income

Respondents' annual family income was categorized initially into six groups, i.e., up to 2 lakhs, 4 lakhs, 6 lakhs, 8 lakhs, 10 lakhs, and 10 lakhs and more. It was approximately categorized based on the monthly minimum salary of Nepal, i.e., Rs. 17,300. 200 US dollars per year, and proportionately differentiation of Rs. 2 lakhs in each group. The result is presented as follows:

Table 9

Respondents' Annual Family Income

Trades/Occupations	Frequency	Percent
Up to Rs. 2 lakhs	181	75.4
More than Rs. 2 lakhs to Rs. 4 lakhs	46	19.2
More than Rs. 4 lakhs to Rs. 6 lakhs	12	5.0
More than Rs. 6 lakhs to Rs. 8 lakhs	1	.4
Total	240	100.0

Table 9 shows that out of six categories, respondents marked up to the four categories where more than three-fourths (75.4%) of the respondents' annual family income was up to Rs. 2 lakhs, followed by more than Rs. 2 lakhs to Rs. 4 lakhs (19.2%), more than Rs. 4 lakhs to Rs. 6 lakhs (5.0%), and only 1(0.4%) respondent had family income more than 6 lakhs to 8 lakhs. For the significance level test among the groups (Brown-Forsythe and Welch tests) from the result of ANOVA, the last category was merged with the third category and renamed as more than 4 lakhs.

Students' Grade Point Average (GPA) of their previous academic performance was categorized in the seven ranks as prescribed by the National Examination Board (NEB). The frequency and percent, along with the letter grading and GPA of the respondents as their previous academic performance, are presented in Table 10.

Table 10

Respondents Prior Academic Performance

Letter Grade	GPA	No. of Students	Percent
D	1.60	13	5.42
C	2.00	35	14.58
C+	2.40	49	20.42
B	2.80	61	25.42
B+	3.20	52	21.67
A	3.60	23	9.58
A+	4.00	7	2.92
Total		240	100

Table 10 presents the respondents' previous academic performance. The highest number of students (25.42%) have an average GPA, i.e., 2.80 (B), followed by above average (21.67%) with 3.20 GPA (B+) and below average (20.42%) with 2.40 GPA (C+). Out of the remaining four categories, both below grades, GPA 2 (C) and GPA 1.6 (D) had a higher number of students, i.e., 14.58% and 5.42% in comparison to GPA A/3.6 (9.58%) and GPA A+/4 (2.92%) respectively. It shows that more academically weak students choose the apprenticeship-based pre-diploma program than academically strong students in Koshi province.

Regarding respondents' decision to choose the apprenticeship-based pre-diploma program, the influencing factors were asked in dichotomous responses, i.e., yes and no. The influencing factors were if they had related training and related work

experience; likewise, if they had study gaps or were dropouts. Similarly, if their friends, family members, and relatives were already in the apprenticeship-based pre-diploma program. The responses are presented in the table 11 as follows:

Table 11

Related Training, Work Experience, Study Gap, & Familiar People

Variable and Responses	Frequency	Percent
Related Training		
Yes	46	19.2
No	194	80.8
Related Work Experience		
Yes	50	20.8
No	190	79.2
Study Gap/Dropout		
Yes	53	22.1
No	187	77.9
Friend/s in Program		
Yes	49	20.4
No	191	79.6
Family Member/s in Program		
Yes	17	7.1
No	223	92.9
Neighbor/s in Program		
Yes	43	17.9
No	197	82.1

As per table 11, in all questions, the majority of the answers were 'no', i.e., related training (80.8%), related work-experience (79.2%), study gap/dropout (77.9%), friend/s in program (79.6%), family member/s in program (92.9%), and neighbor/s in program (82.1%). Among them, the highest number of the respondents were dropouts or had study gaps (22.1%), followed by related work experience (20.8%), friend/s in the program (20.4%), related training (19.2%), neighbor/s in the program (17.9%), and family member/s in the program (7.1%) respectively.

Exploring Factors Predicting Students' Decision to Choose the Apprenticeship-based pre-diploma program

One of the study's major objectives was to identify the factors predicting students' decision to choose the apprenticeship-based pre-diploma program in Nepal. I performed exploratory factor analysis to explore the specific factors because I had prepared the questionnaire from the literature and contextualized it. "In an exploratory factor analysis (EFA), the researcher has little or no idea as to the number or nature of factors that will emerge from the analysis" (Huck, 2012, p. 484). I used EFA to take a set of variables with something in common and reduce them into smaller latent factors (Watkins, 2021). To perform the EFA, I followed the conditions and safety checks suggested by Cohen et al. (2018) and Watkins (2021), as in Table 12.

Table 12

Conditions and Safety Check Results for Factor Analysis

Conditions	Results of this study
1. Data should be in interval scale of at least five-point Likert scale	Six-point Likert scale was used
2. Sample size should not be less than 150	My sample size was 234 and 255 data were entered in SPSS
3. No missing value	The data have been carefully entered and omitted two missing data
4. No outliers	Outliers were checked and 13 outliers were removed for this study
5. Retention of items loading should be greater than 0.3	Item loading was 0.5
6. Kaiser- Meyer-Olkin (KMO) adequacy should exceed 0.5	KMO was 0.719 in this study
7. Factor with Eigen value greater than 1 should be retained	This study retained three factors having Eigen value greater than 1
8. Communalities of average extraction must be greater than 0.5	Communalities of average extraction of all items was 0.56
9. At least three items are needed for retaining a factor	Under each factor, items were from three to four

Another assumption for the exploratory factor analysis is data normality. It is necessary to check data for normality when the sample size is smaller; however, normality is not regarded one of the critical conditions of factor analysis (Garson, 2022). To check the normality, I used Shapiro-Wilk and Kolmogorov-Smirnov test on the three dimensions. The result of the normality test is shown in table 13.

Table 13

Normality Test Using Kolmogorov-Smirnov and Shapiro-Wilk Test

Dimensions	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Personal Interest	.225	240	.000	.837	240	.000
Economic Benefits	.143	240	.000	.894	240	.000
Source of Information	.111	240	.000	.966	240	.000

a. Lilliefors Significance Correction

For the data normality, the significance value (p-value) is required of greater than 0.05 in both tests. From the table 12, all the dimensions were statistically significant ($p < 0.05$). Nevertheless, the statistical value of Shapiro-Wilk test for all the three dimensions is close to 1. Hence, all three dimensions' data is considered normal distribution (King & Eckersley, 2019). Moreover, to confirm the data normality, I tested Skewness and Kurtosis for all three dimensions, which are essential tools for normality check (Cohen et al., 2018). The normality test using Skewness and Kurtosis is presented in table 14.

Table 14

Normality Test Using Kurtosis and Skewness Test

Dimension	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Personal Interest	240	-1.338	.157	1.974	.313
Economic Benefits	240	-1.052	.157	.652	.313
Source of Information	240	-.498	.157	-.256	.313

Skewness and Kurtosis values in the table 14 of all the three dimensions (personal interest, economic benefits, and source of information) are within the range of $\pm$ 2, it indicates univariate normality as Skewness is below 2 and Kurtosis is below 7 (Watkins, 2021). Thus, it is confirmed that all the data of the three dimensions are normal.

I used Principal Component Analysis (PCA) as the factor extraction method to perform the Exploratory Factor Analysis (EFA). The method is a technique to reduce the dimensionality of datasets, and it is also applied to develop, refine, or assess surveys, tests, and questionnaires (Huck, 2012). PCA is a data reduction technique and a tool to construct well questionnaires and surveys.

For the exploratory factor analysis, the factors extracted from the correlation matrix should be rotated, so, I used the varimax rotation. I also tested Kaiser-Meyer-Olkin (KMO) for this study; the KMO measure was 0.719 and had a significance level at 0.000. For the safety checks to run EFA, KMO should exceed more than 0.5 (Watkins, 2021). The KMO and Bartlett's test for measures is presented in Table 15.

Table 15

KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.719
Bartlett's Test of Sphericity	Approx. Chi-Square	477.074
	df	55
	Sig.	.000

For good sampling adequacy, at least three items should be in each factor (Garson, 2022). In my study, there are three to four items in each factor. The cutoff value for this study was 0.5, which is greater than the required value of 0.3. For values less than the cutoff value, i.e., 0.5, the loaded items were deemed as they were not loaded in the factors.

After all the assumptions were fulfilled and the factor extraction and rotation methods were selected, 10 items were retained under three factors (dimensions) - personal interest, economic benefits, and source of information. The Eigen value of all factors was more than 1, and that was spotted on the scree plot. The factors with their respective initial Eigen values are shown in Table 16.

Table 16

Factors and Their Initial Eigen Value from PCA

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.648	26.485	26.485	2.648	26.485	26.485	2.089	20.891	20.891
2	1.593	15.928	42.413	1.593	15.928	42.413	1.843	18.429	39.320
3	1.366	13.657	56.070	1.366	13.657	56.070	1.675	16.750	56.070
4	.853	8.531	64.601						
5	.768	7.682	72.283						
6	.685	6.850	79.132						
7	.638	6.380	85.512						
8	.586	5.864	91.376						
9	.471	4.706	96.082						
10	.392	3.918	100.000						

Extraction Method: Principal Component Analysis.

Similarly, the scree plot of these three factors is presented in the figure 2 where the breaks can be seen below 1 Eigen value.

Figure 2

Scree Plot of the Associated Factors

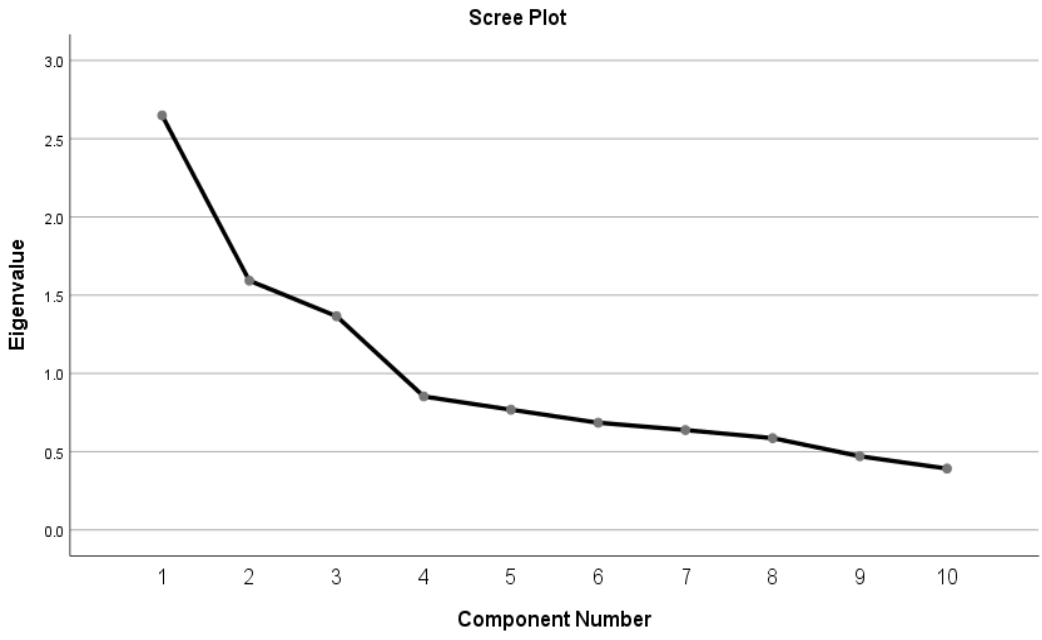


Figure 2 also portrays that the three components had more than half of the total variance out of 10 components. All the exploratory factor analysis assumptions were satisfied for this study, resulting in 10 items loaded into three factors or dimensions. The loaded factors and their items, including deemed values, are presented in Table 17 under the specific section of the dimensions.

Nomenclature of Factors Predicting Students' Decision to Choose the Apprenticeship-Based Pre-Diploma Program

The structure matrix of the three factors from the varimax rotation is mentioned in table 17. The matrix revealed that factor one contained three items, factor two contained three, and factor three contained four items. These three factors combined to explain 56.08% of the total variance. One of the major tasks of the factor analysis is to provide appropriate and meaningful names to the factors that should cover all the issues of listed items (Cohen et al., 2018). Thus, with the expertise gained from the literature review and the experts in the area of TVET, I gave names to the three factors. The final factors were personal interest, economic benefits, and source of information.

Table 17

Factors Predicting Students' Decision to Choose Apprenticeship-Based Pre-Diploma Program

Rotated Component Matrix[a]

	Component		
	1	2	3
I like work-based learning more than school education	**.771**	.045	.005
I am interested in technical subject	**.747**	.023	-.004
I like this program more than other technical programs	**.636**	.156	.127
The apprenticeship-based pre-diploma program is free of cost	.144	**.801**	.121
Because of the money as incentive/travel expenses	-.087	**.797**	.177
Because of the system of learning and earning	.174	**.660**	.040
The advertisement attracted me	-.121	.128	**.753**
Community people have positive perception toward it	.196	-.121	**.734**
On my family member's suggestion	.066	.157	**.729**
On suggestion from the people beyond my family	.036	.219	**.622**

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a. Rotation converged in 5 iterations.

In table 17, factor one, loaded with three items, is named as personal interest. The factor loading ranges from 0.771 to 0.636 (explained variance 2.65%); they are more than the minimum factor loading value of 0.5. The items loaded under the first dimension compare two types of education, interest in technical subjects, and two kinds of technical programs. All three items are connected to the students' interests that drag them toward the apprenticeship-based pre-diploma program in technical education. Personal interest is a subject or question that inspires interest first; it comes from an individual's knowledge about a specific subject, which is to be focused on one subject to be examined clearly (Machi & McEvoy, 2016). The loaded items inspired the respondents to mark their degree of interest in technical subjects, and they were about individual knowledge of specific work-based learning. Similarly, each item focused on one subject, i.e., technical and better technical subjects. Thus, the first factor having these characteristics is named as personal interest for this study.

Adolescents develop their understanding of ability and selection, which may lead them to revise their initial choice based solely on their interests (Super, 1955, as cited in Safarmamad, 2017). Personal interest under the personal factor is to develop an ability to select and revise personal choices that were loaded in dimension 1. Given that the initial factor possessed the previously mentioned traits of an individual, we refer to it as personal interest.

The term "economic factor" refers to the second factor, which has three loaded items. The factor loading ranges from 0.801 to 0.661, explaining a variance of 1.59%; these values exceed the minimum factor loading value of 0.5. The reasons for choosing the apprenticeship-based pre-diploma program, such as its free cost, incentives, and learning by-earning features, are loaded under the second dimension. Students expect economic and financial benefits from the prospective occupations as well as job opportunities (Safarmamad, 2017). Students choose the apprenticeship-based pre-diploma program due to their expectation of incentives, free courses, and the expectation of earning through job opportunities. For disadvantaged groups who cannot pay fees and aim to enter the labor market sooner, these TVET programs offer economic benefits (Lamb, 2011, as cited in Safarmamad, 2017). Since the loaded three items in the second component are related to their present and future economic benefits, as Lamb suggested, the economic outcome is a better fit for this factor.

The final factor includes four items that are related to motivation towards the apprenticeship-based pre-diploma program: advertisements, perspectives from community members, suggestions from family members, and suggestions from sources other than family members, respectively. The factor loading ranges from 0.753 to 0.622 (explained by a variance of 1.37%), surpassing the minimum factor loading value of 0.5. All the loaded items address the role of other influential individuals or phenomena in persuading an individual to choose the program. It is likely to align with the term "subjective norm," as it essentially addresses the question, "Do other people want me to do that?" (Ham et al., 2015, p. 739). Subjective norm denotes the trust that a person or group of people suggest or approve of a particular behavior (Ham et al., 2015). Subjective norm is the influencing factor that can force other people in decision making it may consist of the respondents' family members, relatives, teachers, peers, and their community people. Subjective norm seems more active to influence the adolescents and vulnerable people.

Stating the impact of subjective norms, Dong et al. (2023) state that it can influence the relationship between extrinsic and intrinsic motivations and behavioral intentions. Extrinsic motivation talks about external stimuli, such as different types of rewards or certificates that others can easily affect. In the apprenticeship-based pre-diploma program, the advertisement heavily relies on information about incentives and direct benefits and recommendations from previous school personnel, friends, family members, and community members. Students support intrinsic motivation when it aligns with their personal values, goals, and self-validation outcomes.

The self-determination theory suggests that some motivational strategies include providing relevant feedback and offering incentives (Ryan & Deci, 2020). As highlighted by Ryan and Deci, one of the key components was the advertisement for the apprenticeship-based pre-diploma program, which offers incentives such as travel costs and wages, uniforms, and accidental insurance, along with real-world work experience and academic degrees. Similarly, the relevant feedback that was also highlighted by Dong et al. (2023) and Hem et al. (2015), as advice or suggestions from others, here in the other three items, the subject norm is family members, other than family members, and assumptions of community people. These four items, which fall under the third component, pertain to the external motivational factors influencing the respondents' apprenticeship choice. Therefore, the "subjective norm factor" accurately describes these loaded items.

Internal Consistency and Descriptive Statistics of the Factors

I used Cronbach's alpha coefficient to assess the internal consistency of the three factors identified by the Principal Component Axis (PCA). Table 18 presents Cronbach's alpha value and descriptive statistics for all three factors, respectively.

Table 18

Cronbach's Alpha and Descriptive Statistics of the Factors

Factors	No. of Items	Cronbach's alpha	Mean	SD
Personal Interest	3	0.756	5.37	.669
Economic Outcome	3	0.869	4.75	1.113
Subjective Norm	4	0.715	4.36	1.056

SD= Standard Deviation

Table 18 shows the internal consistency of all the factors identified by PCA. The table also presents the three factors' mean score and standard deviation. The Cronbach's alpha ranges from 0.715 to 0.869, with a cutoff value of 0.7. The factor of personal interest has Cronbach's alpha value of 0.756, which indicates good reliability. Likewise, the economic outcome factor has Cronbach's alpha of 0.869, indicating very good reliability. Finally, the subjective norm has Cronbach's alpha value of 0.715, which is also a good reliability.

The mean value ranges from the lowest 4.36 subjective norm to the highest 5.37 personal interest. Similarly, standard deviation ranges from 0.669 to 1.113, between -2 to +2. Thus, the respondents chose the apprenticeship-based pre-diploma program based on their interests, followed by the economic outcome and subjective norm. The low mean value of the factor, the subjective norm, is the least influencing factor in choosing the apprenticeship-based pre-diploma program among the three factors. Likewise, the most influencing factor identified by the other statistical test of EFA is explained in the following section.

Most Influential Factor of Students' Decision to Choose Apprenticeship-Based Pre-Diploma Program

The second research question was to identify the most influential factor among the factors identified by EFA in students' decision to choose the apprenticeship-based pre-diploma program. To determine the most influential factor among the three factors identified from EFA, I used the percentage of variance value of extraction.

Table 19 shows the result of the percentage of variance of all the three factors as follows:

Table 19

Percentage of Variance for the Latent Factors

Component	Factors	% of Variance
1	Personal Interest	26.49
2	Economic Outcome	15.93
3	Subjective norm	13.66

Table 19 presents the percentage of the variance of the three factors having more than 1 Eigenvalue ranging from the lowest, 13.66%, to the highest, 26.49% (Table 16). It shows that the first loaded factor, personal interest, explains 26.49% of the extraction. Likewise, the second loaded factor, economic outcome, explains 15.93%, and the final loaded factor, subjective norm, explains 13.66% of the extraction. Thus, it can be stated that among the factors extracted, the most influencing factor in students' decision to choose the apprenticeship-based pre-diploma program is personal interest, followed by the economic outcome. Similarly, subjective norms are the least influential among the three factors in deciding to choose an apprenticeship-based pre-diploma program in Nepal.

Chapter Summary

This chapter began with the demographic variables of the respondents, including their academic, economic, family, and social information. This chapter also explored the factors that predicted the students' decision to choose the apprenticeship-based pre-diploma program in Nepal. I adopted the Exploratory Factor Analysis (EFA) statistical tool for that. The Principal Component Analysis (PCA) loaded three factors with more than 1 Eigenvalue, 10 out of five factors with 37 items. By the terminology, I labeled specific names to the loaded factors: personal interest, economic outcome, and subjective norm. I again tested internal consistency and descriptive statistics of the newly loaded factors with the Cronbach alpha test, which was reliable. After that, I ended this chapter with the factor – of personal interest as the most influential factor in the student's decision to choose the apprenticeship-based pre-diploma program in Nepal from the measurement of the percentage of variance in the total variance explained EFA.

CHAPTER V
PREDICTING FACTORS AND THEIR DIFFERENCES ACROSS DEMOGRAPHIC VARIABLE

This study aims to determine the factors that influence the students' decision to choose the apprenticeship-based pre-diploma program in Nepal, as indicated by the third research question. This chapter focuses on how various factors such as personal interest, economic outcome, and subjective norms influence the students' decision to choose the program. I started by delving into the statistical tools to uncover the impact of these factors on the students' program selection. I examined all the assumptions before analyzing the statistical tools. I used both descriptive and inferential statistics for the statistical analysis. This chapter also investigates whether the factors influencing the choice of the apprenticeship-based pre-diploma program vary among the demographic variables of the apprentices in Koshi province. I analyzed their demographic variables like gender, ethnicity, locale, school type, and family income. Initially, I employed descriptive and inferential statistical analysis methods in this chapter.

Factors Influencing Students' Choice Across Demographic Variables

For this study, I used inferential statistics, an independent sample t-test, and a one-way univariate analysis of variance (ANOVA) at a significance level of 0.05 to see if the factors that affected students' choice to join the apprenticeship-based pre-diploma program were different across different demographic variables. I set the acceptable margin of error at 5%, denoted by alpha (α) = 0.05. I used the independent sample t-test for gender and school type because the independent variables were categorical and consisted of two groups. Similarly, I utilized the ANOVA test for the other independent variables, such as ethnicity, locale, and family income. This was done by converting the dependent variables into a scale and calculating the average of all three factors identified in the EFA. Similarly, all the other independent variables were categorical, consisting of more than two groups. I also used the Mann-Whitney U test and G* power analysis as per the requirements.

Differences in Dimensions cross Demographic Variables

To determine the differences in factors, I examined them under the demographic variables: gender, ethnicity, locale, type of school, and family income,

respectively. I met four assumptions to calculate the *t*-test and ANOVA. One of the assumptions requires the measurement of the dependent variable on a continuous scale or at least an interval scale. I also assume a normal distribution of the dependent variable within the population. Likewise, samples should be independent and randomly collected. Finally, I used Levene's test to test for homoscedasticity or equal variance in each group (Mooi & Sarstedt, 2010). The previous chapter of this study discussed the meeting of the first three assumptions. We conducted Levene's test for equal variance for the final assumption, as shown in the table below:

Table 20

Levene's Equal Variance Test

Attributes	Levene Statistics	Df	Sig.
Personal Interest			
Gender	2.037	238	0.155
Ethnicity	1.394	239	0.237
School Type	0.013	238	0.908
Family Income	0.450	239	0.718
Locale	0.123	238	0.726
Economic Outcome			
Gender	0.540	238	0.463
Ethnicity	0.628	239	0.643
School Type	0.886	238	0.908
Family Income	0.195	239	0.900
Locale	0.562	238	0.454
Subjective Norm			
Gender	0.386	238	0.535
Ethnicity	0.933	239	0.446
School Type	5.719	238	0.018
Family Income	0.619	239	0.603
Locale	0.079	238	0.779

From Table 20, under personal interest, all attributes - gender, ethnicity, school type, locale, and family income satisfied the assumption of homogeneity of variances ($p>0.05$). Similarly, under economic outcome, all the attributes satisfied the assumption of homogeneity of variances ($p>0.05$). Finally, under the subjective norm,

the four attributes - gender, ethnicity, family income, and locale satisfied the assumption of homogeneity of variances (*p>0.05*). However, only school type did not satisfy the assumption of homogeneity (*p<0.05*).

To adjust the violation of homogeneity of variances, another robust test, the Mann-Whitney U test, and G*power analysis, were performed, respectively. I set the following hypotheses for this study:

$H_0$1: Personal interest differs across gender, ethnicity, locale, school type, and family income.

$H_0$2: Economic outcome differs across gender, ethnicity, locale, school type, and family income.

$H_0$3: Subjective norm differs across gender, ethnicity, locale, school type, and family income.

Gender and Dimensions

The dimensions that influence the students' decision to choose the apprenticeship-based pre-diploma program may differ across the gender of the apprentice. Initially, gender was categorized into three attributes - male, female, and others. Sinc the respondents did not select 'others' as their gender. I categorized into male and female only, where male respondents were 107 (44.58%) and females were 113 (55.42%). For gender, all the factors met the assumptions of the *t*-test, so the null hypothesis was tested using the *t*-test. For the factors, gender met the assumption of homogeneity of variances. The result of independent sample *t*-test for gender with personal interest, economic outcome, and subjective norm is presented in Table 21.

Table 21

Associated Factors across Respondents' Gender

Variables	Gender	N	Mean	t-value	Sig. (two tailed)
Personal Interest	Male	107	5.32	-1.103	0.271
	Female	133	5.41		
Economic Outcome	Male	107	4.70	-0.511	0.610
	Female	133	4.78		
Subjective Norm	Male	107	4.29	-0.871	0.384
	Female	133	4.41		

a. Equal variances assumed

Table 21 shows the result of the independent sample t-test that there is no significant statistical mean difference (*t=-1.103, p>0.05)* in personal interest across genders. Similarly, there is no significant statistical mean difference (*t=-0.511, p>0.05*) in economic outcomes across gender. Likewise, there is no significant

statistical mean difference (*t=-0.871, p>0.05)* in subjective norms across gender. Thus, it is confirmed that there is no statistical mean difference in personal interest, economic outcome, and subjective norm among students' gender. It shows that both male and female students are influenced at the same level by personal interest, economic outcome, and subjective norms while choosing the apprenticeship-based pre-diploma program as their career choice and further study.

Previous School Type and Dimensions

Dimensions influencing the students' decision to choose the apprenticeship-based pre-diploma program may differ according to their previous school type. School type was categorized into two - public school (N=188, 78.33%) and private school (N=52, 21.67%). For types of previous schools, all the factors met the assumptions of the *t*-test, except the subjective norm; thus, the null hypothesis was tested using the *t*-test as follows:

Table 22

Associated Factors across Respondents' Previous School Type

Variables	School Type	N	Mean	t-value	Sig. (two tailed)
Personal Interest	Public	188	5.40	1.397	0.164
	Private	52	5.26		
Economic Outcome	Public	188	4.77	0.614	0.540
	Private	52	4.66		
Subjective Norm	Public	188	4.49	3.287	0.002**
	Private	52	3.90		

a. Equal variances assumed

*b. Equal variances not assumed***

Table 22 shows the result that there was no significant statistical mean difference in personal interest (*t=1.397, p>0.164*) and economic outcome (*t=0.614, p>0.05*). However, there is a significant statistical mean difference in subjective norm (*t=3.287, p<0.05*). This means that the influence of the subjective norm on choosing the apprenticeship-based pre-diploma program was at a higher level than that of the public schools (M=4.49) and the private schools (*M=3.90*). Since the type of previous schools, public and private, of the students of the apprenticeship-based pre-diploma program made a difference in the subjective norm, to crosscheck and confirm the

result, further Mann-Whitney *U* test (a nonparametric equivalent to a *t*-test) was conducted (Zyoud et al., 2010, as cited in Huck, 2012).

Table 23

Subjective Norm across Respondents' School

Tests	Subjective Norm
Mann-Whitney U	3519.500
Wilcoxon W	4897.500
Z	-3.098
Asymp. Sig. (2-tailed)	.002

a. Grouping Variable: Type of their previous school

Table 23 shows that *U=3519.500, z=-3.098* and *p=0.02(<0.05).* It was confirmed that subjective norms influenced the public school students more than the private school students. Likewise, a G* power analysis was conducted to assess the power of difference. The result showed by the G* power analysis (d) was 0.54, which indicated the medium effect as the cutoffs for a small (*d=0.20*), medium (*d=0.50*), and large effect (*d=0.80*), respectively (Cohen, 1988, as cited in Bartlett, 2022). This means that, though the type of previous schools matters in the subjective norm when choosing the apprenticeship-based pre-diploma program, the statement was not strong enough. It was moderately significant.

Locale and Dimensions

The predicting factors for the students' decision to choose the apprenticeship-based pre-diploma program may differ across their locale. Locale was categorized into two groups - rural (N=195 81.25%) and urban (N=45, 18.75%). For the students' locale, all the factors met the assumptions of the *t*-test; thus, the null hypothesis was tested using a *t*-test for a locale with personal interest, economic outcome, and the subjective norm is presented in Table 24.

Table 24

Associated Factors across Respondents' Locale

Variables	Gender	N	Mean	t-value	Sig. (two tailed)
Personal Interest	Rural	195	5.38	0.584	0.562
	Urban	45	5.32		
Economic Outcome	Rural	195	4.74	-0.209	0.834
	Urban	45	4.78		
Subjective Norm	Rural	195	4.37	0.410	0.682
	Urban	45	4.30		

a. Equal variances assumed

Table 24 shows the result of the independent sample t-test that there is no significant statistical mean difference (*t=0.584, p>0.05)* in personal interest across locale. Similarly, there is no significant statistical mean difference (*t=-0.209, p>0.05*) in economic outcome across locale. Likewise, there is no significant statistical mean difference (*t=0.410, p>0.05)* in subjective norms across gender. Thus, it is confirmed that there is no statistical mean difference in personal interest, economic outcome, and subjective norm among the locale of students. It shows that both rural and urban students were influenced to choose the apprenticeship-based pre-diploma program at the same level by personal interest, economic outcome, and subjective norms.

Ethnicity and Dimensions

The dimensions influencing the students' decision to choose the apprenticeship-based pre-diploma program may differ across ethnicities. Ethnicity was categorized into five groups - Brahmin (N=26, 10.8%), Chhetri (N=15, 6.3%), Ethnic (N=108, 45%), Dalit (N=55, 22.9%), and others (N=36, 15%) respectively. All the factors for the students' ethnicity met the assumptions of ANOVA. Thus, the null hypothesis was tested using ANOVA for personal interest, economic outcome, and subjective norm in table 25.

Table 25

Associated Factors Across Respondents' Ethnicity

Ethnicity	F	Sig.
Personal Interest	1.394	0.237
Economic Outcome	0.765	0.643
Subjective Norm	0.436	0.446

From Table 25, the result of one-way ANOVA reveals that there is no statistical difference in personal interest (*F=1.394, p>0.05*), economic outcome (*F=0.765, p>0.05*), and subjective norm (*F=0.436, p>0.05*). Since the group size was not equal, the Brown-Forsythe and Welch tests were run.

Table 26

Brown-Forsythe and Welch Tests on Factors across Ethnicity

Robust Tests of Equality of Means	Statistics	df	Sig.
Brown-Forsythe			
Personal Interest	1.210	110.585	0.311
Economic Outcome	0.678	120.477	0.608
Subjective Norm	1.058	145.893	0.379
Welch			
Personal Interest	1.297	59.245	0.282
Economic Outcome	.0634	63.431	0.640
Subjective Norm	1.100	64.235	0.364

a. Asymptotically F distributed

The result shows no drastic reduction in the significance level of Brown-Forsthe and Welch tests compared to ANOVA, and their significance level was higher than 0.05 (*p>0.05*). Hence, it is confirmed that there is no statistical difference in personal interest, economic outcome, and subjective norm among the ethnicity of the students regarding the decision to choose the apprenticeship-based pre-diploma program. It shows that students from all ethnic backgrounds have the same level of influence by personal interest, economic outcome, and subjective norms while choosing the apprenticeship-based pre-diploma program.

Family Income and Dimensions

The dimensions influencing the students' decision to choose the apprenticeship-based pre-diploma program may differ across their family income. Initially, family income was categorized into six groups. But later, due to not being marked and only one respondent, I recoded the groups into three groups - Up to 2 lakhs (N=181, 75.4%), More than 2 lakhs to 4 lakhs (N=46, 19.2%), and more than 4 lakhs (N=13, 5.4%) respectively. All the factors for the student's family income met the assumptions of the ANOVA test. Thus, the null hypothesis was tested using ANOVA for personal interest, economic outcome, and subjective norm in Table 27.

Table 27

Associated Factors Across Family Income

Family Income	F	Sig.
Personal Interest	0.450	0.718
Economic Outcome	0.195	0.900
Subjective Norm	0.694	0.603

From table 27, the result of one-way ANOVA shows that there is no statistical difference in personal interest (*F=0.450, p>0.05*), economic outcome (*F=0.195, p>0.05*), and subjective norm (*F=0.694, p>0.05,*). Since the group size was not equal, the Brown-Forsythe and Welch tests were run.

Table 28

Brown-Forsythe and Welch Tests on Factors Across Family Income

Robust Tests of Equality of Means	Statistics	df	Sig.
Brown-Forsythe			
Personal Interest	0.065	66.969	0.938
Economic Outcome	0.222	46.652	0.802
Subjective Norm	1.071	56.785	0.350
Welch			
Personal Interest	0.51	31.601	0.950
Economic Outcome	0.218	29.611	0.805
Subjective Norm	0.977	30.905	0.388

a. Asymptotically F distributed

Table 28 reveals no drastic reduction of the significance level of Brown-Forsthe and Welch tests compared to ANOVA, and their significance level was higher than 0.05 (*p>0.05*). Hence, it is confirmed that there is no statistical difference in personal interest, economic outcome, and subjective norm among the students' family income concerning the decision to choose the apprenticeship-based pre-diploma program. It shows that students from all economic levels have the same influence by personal interest, financial outcome, and subjective norms regarding the decision to choose the apprenticeship-based pre-diploma program.

Chapter Summary

In this chapter, I examined whether the associated factors - personal interest, economic outcome, and subjective norm of students' decision to choose the apprenticeship-based pre-diploma program - differed statistically across their demographic variables. The result showed that all the factors associated with the students' decision to choose the apprenticeship-based pre-diploma program did not differ across gender, ethnicity, locale, and family income. However, only one variable, the type of school, was significantly associated with subjective norms. This means that subjective norms are more influential on public school students than private school students in decision-making for apprenticeship-based pre-diploma programs. Then, I examined the statistical power of the difference of the school type in occurrence to subjective norm using G* power analysis that showed a moderate effect. Overall, the explored factors predicting students' decision to choose the apprenticeship-based pre-diploma program do not differ across their demographic variables, i.e., gender, ethnicity, locale, school type, and family income.

CHAPTER VI
FINDINGS AND DISCUSSION

In this chapter, I present the significant findings of this study research about the three research questions raised in the first chapter. The major essence of the findings has been discussed under three themes. The findings have been portrayed by incorporating results from Chapters IV and V, respectively. The three themes are personal interest, economic outcome, and subjective norm. I also present a model as an output of this study based on the different themes discussed in this chapter.

Major Findings of the Study

The study identified three major attributes that predict students' decisions to choose the apprenticeship-based pre-diploma program in Nepal. I incorporated concepts from the literature, developed a questionnaire based on literature and expert consultation, and then utilized exploratory factor analysis (EFA) to pinpoint the primary predicting factors. The three identified factors are personal interest, economic outcome, and subjective norm. Individual interest encompasses three specific items. One item pertains to a student's interest in a technical subject. In contrast, the other two items highlight the students' preference for the apprenticeship-based pre-diploma program over other technical programs due to its work-based learning feature. The factor known as personal interest pertains to the students' interest in the apprenticeship-based pre-diploma program and its features.

The economic outcome comprises three components, the first being the free nature of the apprenticeship-based pre-diploma program. Similarly, the second item pertains to another feature of the apprenticeship-based pre-diploma program: the reimbursement of travel expenses. Similarly, the third item pertains to the learning and earning system within the apprenticeship-based pre-diploma program. All the items pertain to the financial resources offered to students during the program and the aspect of learning and earning; this factor is referred to as the economic outcome.

The final factor, subjective norm is composed of four items, with the first external item being the attraction from the advertisement about the apprenticeship-based pre-diploma program. The second item is the positive perception of the community towards the program. Similarly, the third and fourth items represent the students' decisions, which are influenced by suggestions from family members and

individuals beyond their families. All the items related to the predicting factors for choosing the program are attributed to the external components of the students; thus, the factor has been named the subjective norm.

The study also identified the most influential factor among the extracted factors. Among the three factors, the principal component analysis (PCA), which shows a percentage of variance, reveals that the students' personal interest is the most influential factor in their decision to choose the apprenticeship-based pre-diploma program. The other influencing factors are the economic outcome and subjective norm respectively. Subjective norm such as advertisements, family members, and other people's suggestions, influence their decision to choose the program less than the economic outcome and their personal interests.

The study also examined to what extent the factors associated with students' decision to choose the apprenticeship-based pre-diploma program differ across their demographic variables: gender, ethnicity, locale, school type, and family income. The study employed a t-test for gender, locale, and school type and an ANOVA for ethnicity and family income. The study found no statistically significant differences among other factors in their demographic variables, except for the subjective norm in school type (public and private). The influence of subjective norm is higher on students from public schools than private schools; however, it is moderately significant and not strong enough to differentiate. I find no differences in personal interest, economic outcome, and subjective norm across students' gender, ethnicity, locale, and school type, except the subjective norm across their school type.

Discussions of the Findings

This section delves into the factors that predict students' decision to choose an apprenticeship-based pre-diploma program in Nepal, drawing from existing literature and the vocational choice theory. The section also delves into which of the three factors, identified through exploratory factor analysis (EFA), influence students' program choices most. Finally, the section explores whether the associated factors vary depending on the students' gender, ethnicity, locale, prior school type, and family income.

Personal Interest Factor on Students' Decision to Choose Apprenticeship-Based Pre-Diploma Program

This study found that personal interest is a crucial predicting factor in students' decision to choose an apprenticeship-based pre-diploma program. Under this factor,

students are interested in technical subjects; they like work-based learning more than general education, and they favor apprenticeship-based pre-diploma programs more than other technical programs, respectively. Students who prefer technical subjects are more likely to be drawn to the apprenticeship-based pre-diploma program due to its emphasis on work-based learning, which sets it apart from other technical programs. There has been a big challenge for technical and vocational education in Nepal for linking the skills with the contemporary national and international labor market. In this circumstances, apprenticeship-based technical education and training is a viable program to address skill mismatch and unemployment problem in Nepal. That is seen in the research finding - personal interest in apprenticeship-based technical education has driven the respondents to choose the pre-diploma program with the feature.

Many researchers concur that students' interests significantly influence their choice of course or program. In a study on factors influencing career decision-making among apprenticeships in Nigeria, Osuizugbo et al. (2022) discovered that apprentices' interest and passion are the primary factors influencing their decision to become craftspeople. Their interest and passion in technical and vocational fields guide their career decision-making within the apprenticeship-based pre-diploma program. Being craftspeople is the apprentices' vocational career choice due to their passion in the industrial works. In my study, students had a concept of the program and their future careers through different means of sources. So, interest in physical work and learning by doing approach have been the respondents' interest in the field of TVET.

Similarly, through exploratory factor analysis on influencing factors to choose a bachelor in hotel management, Shrestha (2023) identified personal interest as the most influencing factor among the four loaded factors. Hotel management is associated with physical work and that course is also offered in the apprenticeship-based pre-diploma program in Nepal. Personal interest to work in hotels, automobile, pre-primary schools, IT industries, and construction companies has dragged the respondents toward this program.

Ginzberg (1988), using the lens of vocational choice theory, emphasized that an individual's interests and capacities determine their choice. In this study, students chose eight vocations/trades under the apprenticeship-based pre-diploma program based on their interest and physical capacity for the trades. The theory gave insights to my study in identifying the predicting factors in a TVET program choice. Similarly,

Sharma (2019) found in a study based on exploratory factor analysis that personal attributes like confidence, sincerity, positive thinking, enthusiasm, passion, learning aptitude, responsibility, integrity, and hard work significantly influence the perceived employability of bachelor's degree students in computer engineering. In my study, personal attributes regarding technical and vocational training influenced the students in their decision making. The study underscored the significance of personal attributes in enhancing perceived employability, a finding that aligns with my research.

A study conducted by Safarmamad (2017) identified several factors that influenced students' decision to enroll in the IVET lyceum. The respondents labeled one of the latent factors as suiting their needs. The respondents primarily identified it as a means of highlighting their needs rather than reflecting their personal interests; however, their interests and needs may align. IVET lyceum is an entry to technical and vocational education like pre-diploma program in Nepal. The finding is much aligned to my finding that students' personal interest is the primary factor in choosing the initial technical program. Another relevant study by Zhao and Wang (2020) revealed that family members' support is a highly influencing factor in choosing a modern apprenticeship-based program in e-commerce. However, the authors also discovered that the decision to choose an apprenticeship-based program was influenced by the sharing of previous students' experiences and the program's quality. The study was also done in an apprenticeship-based program, so the teaching learning approach was similar. Like their findings, the respondents of my study also seem influenced by their interest and from senior students. The benefits and trust of the program spark their interest in the apprenticeship-based pre-diploma program.

Ginzberg (1988) highlighted students' personal interest and capacity in the vocational choice theory, but sometimes, they opt for vocational training courses instead due to a lack of options. The theory emphasizes the students' personal interest and capacity in choosing a vocational subject, which aligns well with the findings of this study. In the systematic review study, Akosah-Twumasi et al. (2018) came up with their findings on factors influencing youth career choice through two major perspectives—collectivist and individualistic cultural settings. The review study concluded that in individualistic culture-setting countries such as Canada, Switzerland, the United States of America, and Germany, youths' career choice is primarily influenced by their interests. On the other hand, personal interest has had the least influence on youths' career choices in collectivist culture-setting countries

such as India, South Africa, Ukraine, Bulgaria, and Argentina. However, China, another collectivist country, finds personal interest to be significant. This study also identified personal interest as the most significant predictor of students' decision to choose an apprenticeship-based pre-diploma program among the sample respondents of my study.

Thus, the findings of this study align with the majority of existing literature, such as Akosah-Twumasi et al. (2018), Sharma (2019), Shrestha (2023), and Osuizugbo et al. (2022), which suggest that personal interest is a significant predictor of students' decision to choose a program such as an apprenticeship in technical and vocational education.

Economic Outcome Factor on Students' Decision to Choose Apprenticeship-Based Pre-Diploma Program

This study identified economic outcomes as a significant predicting factor in students' decision to choose an apprenticeship-based pre-diploma program in Nepal. The factors include the fact that the apprenticeship-based pre-diploma program is free of cost, that students receive certain funds as incentives or to cover travel expenses, and that they can earn while they learn. When a formal technical degree is free of charge, and students can earn money during their learning period, the likelihood of them choosing the apprenticeship-based pre-diploma program increases. Particularly, economically disadvantaged students stand to gain significant advantages; they perceive it as a second opportunity for those unable to pursue higher education due to financial constraints or those who wish to spare their family members from financial strain. Therefore, the economic outcome is identified as a promising predictor of students' decision to choose an apprenticeship-based pre-diploma program in a country such as Nepal.

Many research articles portray an economic outcome as a major influencing factor in students' choice of a course or program. Bolli et al. (2019), presenting an evaluation report of the first apprenticeship-based pre-diploma program in Nepal, indicated that the wage or incentive provided by the tripartite agreement is one of the program's attractions. There is a written document and agreement; thus, students, especially the economically poor, would likely choose the apprenticeship-based pre-diploma program. Regarding the formal apprenticeship practice in Nepal, Butwal Technical Institute (BTI) has pioneered conceptualizing apprenticeship and promoting the TVET sector in Nepal. BTI originated as a production-based training institute

utilizing a classic apprenticeship model. The modality involved collaboration in the training facilities with its partner companies, who also provided funding for BTI's services and trainees' fees (Grierson, 1989). When learners do not have to pay for their training, it greatly motivates both them and their parents. The apprenticeship model of technical training and education greatly benefits trainees as they directly contribute to production and gain the opportunity to work in the workplace. With the economic features and job prospects, the respondents are interested in the apprenticeship-based pre-diploma program. Because most of the respondents are from economically poor and geographically remote backgrounds. There is lack of income sources and career growth in the villages of Nepal (Ghaju & Bhattarai, 2021). Their necessity and aspiration influenced them to choose this program in Nepali context.

Ginzberg (1988) discussed how compromise and economic benefit could determine choice in the vocational choice theory. Economically poor students may be compelled to choose the apprenticeship-based pre-diploma program due to its economic features and job security. In this study, students, particularly those from economically disadvantaged backgrounds, have the opportunity to participate in a free workplace-based technical program, which includes specific incentives. There is a high chance of employment in the host companies or other promising institutes in the domestic or international market. The economic outcome, both in terms of opportunity and prospects, significantly influences students' decision to choose an apprenticeship-based pre-diploma program in Nepal.

Some of the findings of the study by Osuizugbo et al. (2022) include the spirit of entrepreneurship and the family's socio-economic status. Similarly, Safarmamad (2017) discovered that the majority of students at the IVET Lyceum in Tajikistan come from rural and economically disadvantaged backgrounds. Both studies reveal that the family's socio-economic background also significantly attracts students to TVET programs. This study also identifies the economic outcome as a significant predictor of students' decision to enroll in the apprenticeship-based pre-diploma program in Nepal. Given that the program is free and allows students to earn while they learn, it presents a significant opportunity for students from economically disadvantaged backgrounds.

Zhao and Wang (2020) found that enterprise job attraction and enterprise salary were some major independent variables in a study on the influencing factors in choosing a modern apprenticeship-based program. Industries typically conduct the

apprenticeship-based program. Though technical schools initiate the apprenticeship-based pre-diploma program in all eight trades in Nepal, the economic feature and job prospects are alike the study of China. Since, most of the students are from economically poor background, economic outcome has been one of the prominent factors in program choice. According to an article by Renold et al. (2018), students dedicate 60 to 80 percent of their course time to workplace learning per their work contracts. An apprenticeship-based program is a demand-driven initiative from industries where students can devote much of their time to learning. In Nepal, industries also provide a minimum of 25% of the basic salary to apprentices including in-company trainers for their workplace training. Therefore, there is a high likelihood of relevant training, incentives, and gainful employment.

This study's findings align with the majority of existing literature, including works by Bolli et al. (2019), Grierson (1989), Osuizugbo et al. (2022), Safarmamad (2017), and Zhao and Wang (2020), all of which suggest that the economic outcome plays a significant role in influencing students' decision to enroll in an apprenticeship-based pre-diploma program. Particularly, students who are economically poor and geographically remote are more likely to choose this program due to its potential economic benefits.

Subjective Norm Factor on Students' Decision to Choose Apprenticeship-Based Pre-Diploma Program

This study discovered that subjective norms significantly influence students' decision to select an apprenticeship-based pre-diploma program in Nepal. Under this factor, the first item represents the effect of advertisement on the students' decision to choose the program; it consists of in-person, digital, and other advertisement mediums. Similarly, the second item represents the community's positive perception of these programs, which encourages students to join them. The third item discusses the suggestions made by the students' family members; a topic that has been extensively studied in previous studies. Finally, the fourth item is similar to the third item, i.e., the influencing people are beyond family members, friends, previous school personnel, relatives, and others. In this way, other people and factors such as subjective norm have also played a predictive role in students' decision to choose an apprenticeship-based pre-diploma program.

Many researchers discovered that other people or subjective norms influence young students' decisions about which courses or programs to pursue. Subjective

norms consist of both descriptive and social norms. Descriptive norms refer to the attitudes and behaviors of significant others to motivate an individual towards certain actions. Similarly, social norms encompass referent individuals and groups such as family, colleagues, relatives, and society, which influence an individual's decision to choose or not choose a particular action (Irawan & Hurriyati, 2021). Since the applicants for the apprenticeship-based pre-diploma program in Nepal are mostly SEE appeared young students, they likely need guidance from their loved ones or motivational advertisements to choose the program. During the pilot study and item analysis, I found some students could not make informed decisions as they sought support from the instructors in marking the answers. In my study, most of the students are academically weak from public schools and villagers. They had limited information about different technical programs for their career shaping. That's why, the study shows that public school students are more influenced by their parents and seniors in decision making.

In a similar study, the subjective norm was one of the factors influencing the Bandung people's decision to shop online. However, it did not significantly influence the decision of the Bandung people to shop online. Other factors significantly influenced online shopping, not the subjective norm (Irawan & Hurriyati, 2021). Contrary to this finding, the subjective norm significantly influences students' decision to choose the apprenticeship-based pre-diploma program; however, it ranks as the least influencing factor among the three latent factors. Especially, the influence of the subjective norm was significantly found in public school students' decisions than that of private schools. There are fewer extra activities and exposure visits for the students of the public schools than from the private schools; that's why, the informed decision part is seen differently in my case.

In a study on the purchasing behavior of green food, Ham et al. (2015) concluded that, in practical terms, subjective norms play a significant role in the model, encompassing both social and descriptive norms. To positively direct social change, it can be effective to focus on environmentally oriented behavior with specific individuals who can shape an individual's identity. Comparatively, individuals with more experience and trust can provide guidance and mentorship for their career choices. On the same note, Safarmamad (2017) could load five latent constructs using Principal Axis Factoring (PAF); they are my needs: marketing, close people, school staff, and economic situation. Similarly, the study revealed that

parents, experience, siblings, job prospects, and friends were the most influential factors in selecting IVET Lyceums. My study also found quite similar latent factors, such as marketing or advertisement, family members, close people, school staff, and friends, who can significantly influence students' decision to choose the apprenticeship-based pre-diploma program in Nepal.

According to Ginzberg's (1988) vocational choice theory, individuals such as family members, neighbors, friends, and teachers can influence a student's choice of vocation. In this study, in addition to the subjective norm, the influence of other people in choosing the apprenticeship-based pre-diploma program was also identified as a significant factor. In a study on the choice of modern apprenticeship-based pre-diploma programs, Zhao and Wang (2020) identified specific independent variables as attracting factors related to the subjective norm, which included the support of family members, the influence of senior students, and the presence of student cadres. Mostly, the youth are easily influenced by their friend circle; similarly, their senior students are good examples of role models, and when family members also support them in a particular direction, they are much more likely to act accordingly. In my research, I incorporated recommendations from family members and individuals beyond the family into the factor analysis. There is a high likelihood of influence from friends, senior students, teachers, relatives, and mentors.

Shrestha (2023) also identified social pressure as a significant latent factor in a study using exploratory factor analysis despite loading it as the final factor among four latent variables. In my study, the subjective norm was found to be the least significant among the three latent factors. His study revealed that peers and teachers significantly influenced students' selection of hotel management programs. He also added that the applicant students would be influenced to choose academic programs based on their friends' suggestions, and they would perceive their teachers as experts and reliable sources of information. They are likely to select the program that their teachers recommend. Adopting the theory of reasoned action, Shrestha claimed that subjective norms, such as peers and teachers, assist students in making informed decisions. In my study, I also found that students from public schools more likely to seek suggestions from others and rely on advertisements to make informed decisions when choosing an apprenticeship-based pre-diploma program.

My study's findings align with the majority of existing literature, including works by Irawan and Hurriyati (2021), Ham et al. (2015), Safarmamad (2017), Zhao

and Wang (2020), and Shrestha (2023). The study indicates that the subjective norm plays a crucial role in predicting students' decision to enroll in the apprenticeship-based pre-diploma program, even though it was the last of three latent factors influencing the decision. It appears that youths lack maturity, leading them to seek assistance from family members, friends, relatives, teachers, and various forms of advertisement. Therefore, the subjective norm has proven to be a significant latent factor in predicting students' decision to choose an apprenticeship-based pre-diploma program in Nepal.

Most Influential Factor in Students' Choice of the Apprenticeship-Based Pre-Diploma Program

This study identified personal interest, economic outcome, and subjective norm as the most influential factors in students' decision to choose an apprenticeship-based pre-diploma program. Numerous studies have yielded varying findings and discussions regarding the most influential factor.

Many studies have found that personal interest is the most influential factor in career choice. In a similar study, Osuizugbo et al. (2022) also found that students' interests and passion were the most influencing factors in choosing an apprenticeship-based craftsperson. Personal interest and passion primarily determine the occupation in the technical and vocational stream, as it requires specific skills, patience, dedication, and hands-on work. Similarly, in an exploratory factor analysis to identify the most influential factor in choosing the hotel management course in Nepal, Shrestha (2023) presented personal interest as the most influential among the four latent factors. A hotel management course is a technical subject, and youths choose it based on their interests.

Sharma (2019) presented a similar study on youths' perceived employability of information technology courses and found that personal attributes, out of five latent factors, were the most influential factor. Although this term may appear distinct from personal interest, it is like the individual's interest-based habit. In a study on the choice of health subjects among 125 students, Gameraddin et al. (2022) found that the most influential factors in students' discipline choice were their interest in helping patients and the community, followed by their personal desire, their desire to help patients, and job opportunity and prestige. The study revealed that the influence of family enforcement and financial factors on students' specialty preferences was less significant. For example, subjects such as health, engineering, preschool teaching, tea

technology, hospitality, and information technology, which are taught in apprenticeship-based pre-diploma programs, are also considered technical subjects. The findings align closely with my research, indicating that students' desires and interests significantly influence their program choices. Unlike the other findings, my study found that economic factors and family-related factors were also significant factors in predicting students' choice of apprenticeship-based pre-diploma programs.

While numerous studies have found that personal interest is the most influential factor in students' decision to choose a program or stream, other studies also suggest that factors other than personal interest play a significant role in career/program choice. In a study on factors influencing students to choose a technical college, Kumazhege (2017) presented that environmental factors and parents-related factors influenced their vocational choice in a technical college. In contrast to my study, students' personality-related factors, friends, and career guidance officers did not influence their vocational choice. In my study, subjective norms, i.e., parents and environmental factors, have the least influence on students' decisions to choose the apprenticeship-based pre-diploma program in Nepal.

In another study, Safarmamad (2017) analyzed the factors that attracted 541 students to a program and found that parents were the most influential factor, followed by experience, siblings, job prospects, and friends. Moreover, Safarmamad (2017) ranked school staff and marketing as the least influential factors. Parents' suggestions, or potential pressure, play a significant role in students' decision to choose a TVET program; this item aligns with my subjective norm factor. However, family members' suggestions are ranked below personal interest and economic outcome.

Similarly, Kazi and Akhlaq's (2017) study revealed that parents significantly influence students' choice of subject specialization, with peers, gender, print media, financial reasons, interest, and other factors closely following. In contrast to the results of my study, Kazi and Akhlaq found that interest and financial reasons were the least significant factors. Similarly, print media garnered attention due to my study's use of advertisements.

Zhao and Wang (2020) conducted a study on the choice of modern apprenticeship-based pre-diploma programs and found that factors such as gender, the attraction of the job, the salary of the program, family members, senior students, employment attention, and student cadres were influential. My study also identified

similar factors, such as job expectations and stipends; however, the most influential factor differed between this study and my own.

Various studies have identified various influential factors, with personal interest emerging as the most significant factor in career or program choice. The findings of my study, which identified personal interest as the most influential factor, align with the findings of other studies such as those by Osuizugbo et al. (2022), Shrestha (2023), Sharma (2019), and Gameraddin et al. (2022). Studies by Kumazhege (2017), Safarmamad (2017), Kazi and Akhlaq (2017), and Zhao and Wang (2020) assert that factors beyond personal interest, like family members, prospects, and financial considerations, significantly influence students' choice of subject, career, and programs, including TVET programs.

Dimensions across Gender, Ethnicity, Locale, School Type, and Family Income

This study assesses the differences in the latent factors with various demographic variables. We find no statistical difference in personal interest, economic outcome, or subjective norm among the students' genders. In a study on the difference between gender and socioeconomic status in career choice with 229 sampled students, Akinlolu (2022) found women were more influenced by career choice than men. The study found that there was a statistically significant difference in gender stereotypes in terms of low and medium socio-economic groups. Due to socioeconomic aspects, career choice seems different among men and women.

In a study on the preference of specialty of Japanese medical students, the authors Kawamoto et al. (2016) concluded that Japanese medical students had dichotomized some factors for their specialty preference regarding gender. The study showed that women significantly chose pediatrics, obstetrics & gynecology, and psychology more than men, whereas men significantly preferred orthopedics and surgery more than women. In my study, while there was no significant difference in the overall decision of students to choose the apprenticeship-based pre-diploma program, there were more women in the early childhood development facilitation (ECDF) course and in the hotel management course under the program. Similarly, there are significantly more men in mechanical engineering, electrical engineering, building construction, and automobile engineering. It means occupations and programs are selected in terms of students' gender, however, the loaded factors did not significantly differ across gender in my study. I kept students from all eight trades in a single basket as the program, which is the major reason for it.

On the same note, Watt (2010) discussed the low participation of women in STEM (Science, Technology, Engineering, and Mathematics) related fields, citing the need for economic advantage, social equity, and individual well-being. Conversely, the study observed a lower representation of men in fields dominated by women, such as literature and language. The study asserted that the underrepresentation of women in STEM-related fields can be attributed to their lower intrinsic values and perceived abilities. This implies that women tend to be more psychologically, emotionally, and culturally aware, while men tend to be more intrinsically motivated and possess more enduring abilities, which reflect gender differences in career choice. The author also asserts that these differences are significant for work-life balance and social aspects.

Some studies assert no statistically significant difference in career choice based on gender. In a qualitative study on influencing factors on adolescent students' career choice, Hadiyati and Astuti (2023) concluded that the career choice the students chose was not influenced by gender differences but by their interests, intelligence, and special talents. The scenario in my study is similar. At the same time, there may be differences in a particular subject, but the latent factors of personal interest, economic outcome, and subjective norm do not differ across gender in influencing students' decisions to choose an apprenticeship-based pre-diploma program. On the same note, Shrestha (2023) also found that gender-wise, there are no statistically significant differences in choosing a bachelor in hotel management in Kathmandu, Nepal. The assessment of factors that influence respondents' gender yields a dichotomous result.

This study also found no significant difference in personal interest, economic outcome, or subjective norm across ethnicities when it comes to students' decision to choose an apprenticeship-based pre-diploma program in Nepal. However, some studies claim that there exists an ethnic difference in career choice. A meta-analysis on ethnic differences in career choice was conducted. Jang et al. (2019) presented that career choice, aspiration, and perception of opportunities and barriers were statistically significant differences among race and ethnic groups. It claimed that social contextual factors were key in choosing a career. Likewise, the study provided a comprehensive understanding of the different perspectives among minority groups related to career choices.

Strathdee and Cooper (2017) also concluded that the choice of vocational education and training (VET) varied among the ethnic groups in New Zealand.

Participation in both fields of study and occupation differed among the dominant and non-dominant ethnic groups in VET. Furthermore, the study revealed that career choice variations led to earnings disparities among graduates from different ethnic groups. The study demonstrates that the income status of ethnic and non-ethnic groups differs based on the subjects and occupations they choose. Unlike the findings regarding differences in career choice across ethnicities, my hypothesis is rejected. No statistically significant difference in personal interest, economic outcome, or subjective norm exists in students' decision to choose the apprenticeship-based pre-diploma program in Nepal across ethnicity.

Studies on career choice in Nepal based on ethnicity are also available. Sharma (2019) confirmed in a study on the perceived employability in the career choice of engineering students that there was no significant difference in perceived employability across different ethnicities. Therefore, the ethnicity of the students did not significantly influence their perceived employability when it came to their choice of engineering career. On the same note, Shrestha (2023) also confirmed that there was no difference in the latent factors—personal interest, social pressure, outcome expectations, and career development perception—among the ethnicity of the students regarding the choice of a bachelor's hotel management program in Nepal. My study also rejected the research hypothesis that the factors (personal interest, economic outcome, and subjective norm) with students' decision to choose the apprenticeship-based pre-diploma program differ across their ethnicities. There is no significant reason for students' decision-making in program choice based on their ethnicity. Since all eight courses are treated as a single program, the effect of ethnicity was not remarkable enough in program choice. In this study it is found that there is no difference in the associated factors with students' choices of apprenticeship-based pre-diploma programs across their different ethnicities.

This study also assessed if the factors associated with students' decision to choose the apprenticeship-based pre-diploma program differed across their locale—urban and rural regions. The associated factors (personal interest, economic outcome, and subjective norm) do not differ from the student's decision to choose the apprenticeship-based pre-diploma program based on their locale. However, Safarmamad (2017) observed in a study on the choice of IVET schools that most students were from rural regions, with a significant difference in the rural-urban ratio

of 74%:26%. Technical and vocational education is the preference or compulsion of students in rural regions.

A study on career choice among adolescents in three cities showed significant differences in the factors like interest, artistic type, investigative type, social type, and conventional type. Authors Mitevska-Encheva and Tsvetkova (2020) stated that the difference in career choice among the adolescents of the three cities is probably due to dominant value orientations. These values are the basis of behavior and cultural practices in those cities. This implies that each city has its own unique origins and traditions, which in turn influence the career choices of adolescents and young adults.

In a study on the level of determinants of the students' TVET career choice and relationship to their locale, Tamang (2022) found mixed results. Among the five factors, the students' choice was not statistically significant for self-efficacy, financial benefit, and non-financial benefit. Unlike the result, two factors—academic interest and family expectations of the students—were statistically significant. The author stated that rural locales had higher academic interests and family expectations than semi-urban and urban locales. The mean difference shows that there was a statistical difference among the locales as well. In my study, students in two locales—the rural and urban regions—showed no statistically significant difference in their choice of apprenticeship-based pre-diploma program based on personal interest, economic outcome, and subjective norm, respectively.

This study examines if the factors associated with the program choice, i.e., personal interest, economic outcome, and subjective norm, differ according to the students' previous school types, i.e., public and private. The research findings confirm that there is no significant difference in the two factors, personal interest, and economic outcome, based on the student's previous school type. On the same note, Tamang (2022) also confirmed no significant difference in all the determinants - self-efficacy, financial benefit, non-financial benefit, academic interest, and family expectation - between the types of schools and diploma programs for civil engineering students. However, my study found a statistical difference between the subjective norm and the type of school. Subjective norms, such as those from family members, relatives, teachers, friends, senior students, and even advertisements, significantly influenced public school students.

In a similar kind of study, Akpochafo (2021) confirmed that the type of school was significant to career decision-making. The study revealed that private school

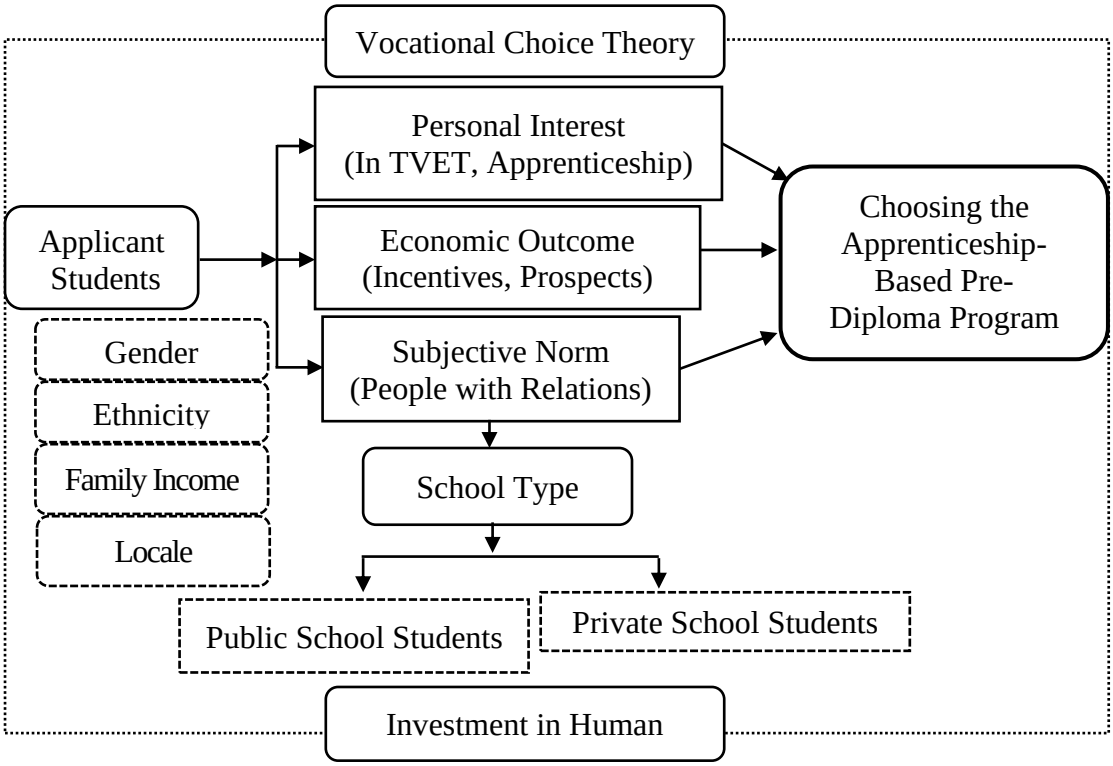
students faced more challenges in making career decisions than their public-school counterparts. Types of schools matter in students' decision-making regarding career choice. A similar result was found in my study: the influence of subjective norms on students' decisions to choose the apprenticeship-based pre-diploma program differed across types of schools.

Finally, the finding of this study confirmed that no difference exists in personal interest, economic outcome, or subjective norm across the students' annual family income. Shumba and Naong (2013) found that families' financial positions affected adversely the students' career ambitions and choices, with the poorest the most affected. Thus, most students' career choices heavily relied on their family's support in pursuing their desired careers. According to Ngesi (2003), as cited in Kazi and Akhlaq (2017), students from poor socioeconomic backgrounds make wrong career decisions and choose short courses and training due to financial constraints. They have constraints and compulsions behind their socioeconomic reason. However, Sharma (2019) confirmed that the occupation of the father and mother does not significantly affect the engineering students' perceived employability, as measured by personal attributes, core attributes, self-management, process attributes, and career guidance. Many studies have suggested that a student's career choice is influenced by their family income; however, my study found no significant differences between the associated factors of personal interest, economic outcome, social norm and the students' annual family income.

Based on the findings and discussion of this study, I have developed a model to describe career choice. This model's dimensions—personal factor, economic factor, and people with relationships for career choice—are explained by the vocational choice theory by Ginzberg (1988). Furthermore, studies by Safarmamad (2017) and Zhao and Wang (2020) have also emphasized the factors involved in selecting the apprenticeship model for technical and vocational programs. There are currently eight courses under the apprenticeship-based pre-diploma program in Nepal; however, this study has consolidated all courses into a single apprenticeship-based pre-diploma program due to their common features and facilities. Figure 3 illustrates the decision-making model for students selecting the apprenticeship-based pre-diploma program.

Figure 3

Model Determining Decision to Choose Apprenticeship-Based Pre-Diploma Program



This model describes that a personal interest in TVET and apprenticeship influenced the applicant students in the program, which was the most influential factor in choosing the apprenticeship-based pre-diploma program in my research. The program's economic outcome, such as incentives and employment prospects, influenced the applicants. Similarly, the third factor, subjective norm, i.e., people with relations - relatives, friends, other people, and publicity - also significantly influenced the applicants to help their decisions in program choice indicated in the vocational choice theory of Ginzberg (1988). The difference in the size of the boxes shows the degrees of the influential factors. All three factors were not equally different across the students' demographic variables - gender, ethnicity, family income, locale, and school type. However, the subjective norm moderately differed according to their school type, i.e., public school students were more influenced by their parents, relatives, and friends than private school students. In the model, the portion of the influence from the subjective norm is shown heavier in public school students than in private schools. In choosing the apprenticeship-based pre-diploma program, there is a huge investment in students. Investment in students/apprentices is likely to lead them toward competent human resources as per the needs of the labor market; that's why

this model takes reference from the another lens of the human capital theory by Becker (1994). Apprenticeship-based pre-diploma program consists of huge investment from donor agency, government, technical schools, and the industries. That's why, the concept of investment in human has been added in this model as there are also other kinds of investment from the students and their parents. Students and their parents would have thought of the investment from their side that is investment for human workforce. Students' decision to choose the apprenticeship-based pre-diploma program was expected to be determined by their demographic variables. In terms of occupation, choice factors were found to be different across their demographic variables, however, in the whole program, the associated factors were not significantly differed there. It has been found that only the students, as per their previous school types, have been significantly influenced by the subjective norm. An apprenticeship-based pre-diploma program is an investment in humans to produce market-oriented competent human resources. Thus, factors predicting students' decision to choose the apprenticeship-based pre-diploma program have been explored in vocational choice theory and investment in human concept through this model.

Chapter Summary

This chapter concludes with the main findings of this study. Three factors - personal interest, economic outcome, and subjective norms are the factors predicting students' decision to choose the apprenticeship-based pre-diploma program in Nepal. Among them, personal interest was the most influential factor in students' decision to choose the program. Among all the factors, only subjective norm was found to be a significant difference between the students' school types, i.e., public school students were to be more influenced by the subjective norm. All the factors did not differ according to the student's gender, ethnicity, locale, and family income. Students' types of school were also not found to be different in terms of their personal interests and economic outcomes. After describing major findings based on the research questions, I discussed the findings with existing literature and the theory. Finally, I constructed a model that explains the factors predicting students' decision to choose the apprenticeship-based pre-diploma program through vocational choice theory and the concept of investment in human.

CHAPTER VII
SUMMARY, CONCLUSION, AND IMPLICATIONS

The last chapter summarizes the study and draws a conclusion based on the findings and discussion. At the end of this chapter, I formulated the practical implications for the heads and coordinators of technical institutions, potential students, and parents of the apprenticeship or technical and vocational programs. I also developed implications for policymakers and considerations for future research. Finally, I concluded my study by reflecting on my findings.

Summary of the Study

There are multiple options for school graduates, especially in two streams: general education and technical education. The notion of technical and vocational education is to link youths to the labor market with marketable skills. Different technical and vocational education modalities exist in Nepal, with apprenticeship-based technical education providing skill learning in both technical schools and industry/business organizations. The program is free of charge; students get daily Rs. 100 as travel expenses, and industries also pay as per a tripartite agreement. Thus, the program is viable for SEE graduate students who are poor, academically weak, and from marginalized communities. Research frequently reveals that males predominate in technical and vocational education, with a higher preference for rural students over urban ones, students from public schools over private ones, and students from impoverished families. Various factors influence students' decision to choose an apprenticeship-based pre-diploma program, including personal interests, relationships, advertisements, career prospects, and economic factors. However, researchers have not yet explicitly studied the factors that predict students' decision to choose the apprenticeship-based pre-diploma program.

To fill the research gap, this study has formulated three research questions. What factors predict students’ decisions to choose an apprenticeship-based pre-diploma program? Which is the most influential factor in students' decision to choose the apprenticeship-based pre-diploma program? and, to what extent do the factors associated with students’ decision to choose the program differ across the demographic variables (gender, ethnicity, locale, school type, and family income)?

The survey with first-year students from all eight occupations was held in Koshi province to explore the answers to the questions.

This study used a cross-sectional survey design, and its approach was post-positivist. I constructed the scale by referencing Safarmamad (2017), and Zhao and Wang (2020), respectively. I contextualized it within the framework of the apprenticeship-based pre-diploma program in Nepal. After the construction of 48 items, I did item analysis in semantic scale response format and retained 39 items. Then, I developed the questionnaire into six Likert scales for positive responses: 6 = strongly agreed, 5 = mostly agreed, 4 = reasonably agreed, 3 = somewhat agreed, 2 = fairly agreed, and 1 = least agreed. I also included demographic items for the pilot testing. All five dimensions—personal interest, economic benefit, other benefits, source of information, and prospects of the program—had a value of >0.70, indicating reliability, with the exception of personal interest, which was marginally accepted at 0.64. For the sample size of 234, after filtering data, I finalized the data from 240 students among the population of 594. I also ensured content, construct and criterion validity, and ethical considerations during the study.

The exploratory factor analysis (EFA) loaded three dimensions: personal interest, economic benefits, and subjective norm. Similarly, the extraction from the percentage of variance value revealed that personal interest was the most influential factor in students' decision to select the apprenticeship-based pre-diploma program in this study. This study investigated potential differences in the associated factors across various demographic variables. Only the subjective norm, or individuals with relationships, showed a statistical difference between the students' public and private schools. The remaining factors associated with the student's choice of the program did not differ across their demographic variables. Based on the findings and discussion, I have constructed a model for this study.

Conclusion

The apprenticeship-based pre-diploma program focuses on workplace learning and targets academically weak, economically poor, and marginalized students with technical and vocational education with a learning approach in Nepal. There are many predicting factors in students' decision to choose the apprenticeship-based pre-diploma program; nevertheless, personal interest, economic outcome, and subjective norm are the three major predicting factors in this study.

Firstly, personal interest in technical and vocational education drives them toward the apprenticeship-based pre-diploma program. In this study, personal interest-related factors such as interest in technical subjects, a preference for work-based learning, and a preference for an apprenticeship-based pre-diploma program over other technical programs influence students' decision to choose the program. Vocational choice theory also presents personal interest as a prominent factor in career choice. Based on personal interest, students decide to choose the apprenticeship-based pre-diploma program in Nepal.

The second factor, the economic outcome, plays a crucial role in students choosing the apprenticeship-based pre-diploma program. Not only is the program free of charge, but technical schools and industries also provide financial incentives or reimburse travel expenses. Similarly, the program offers the opportunity to earn while learning. Therefore, it is particularly appealing to economically disadvantaged students and those seeking financial independence for their families. The vocational choice theory emphasizes that students choose the apprenticeship-based pre-diploma program in Nepal due to its association with direct employment and its contribution to income generation through production.

Ultimately, a multitude of individuals and events play a significant role in shaping the career or program choices of young students. Vocational choice theory highlights that source of information, such as advertisements and people with relations, can suggest and influence students to choose a career or program. In this study, subjective norm such as program advertisements, positive perceptions from the community, suggestions from family members, and recommendations from others such as peers, staff, and relatives have also significantly influenced the students' decision to choose a program. They serve as dependable sources of information and mentors, assisting young students in making informed decisions about their program choices.

Among the three loaded dimensions, personal interest is the most influencing factor in students' decision to choose the apprenticeship-based pre-diploma program. The program is concerned with hands-on technical education, which requires interest, ability, and skill adaptation; thus, it seems more crucial than economic outcome and the influence of advertisements and people. The associated factors, such as the students' gender, ethnicity, location, school type, and family income, do not significantly differ, except for the subjective norm that varies between the students'

previous school types, namely public and private. Public school students rely more on advertisements and people with relations to make their program choices than their private school counterparts. Adolescents from public schools have less opportunity to engage in extra activities and access to source of information than private school students, thus, their informed decision-making is weaker than private school students. Overall, the associated factors influencing students' decision to choose a program are consistent across all demographic variables.

The choice of technical and vocational sector programs, including the apprenticeship model, is a complex phenomenon for young students. It offers students a free course with incentives, allowing them to earn while they learn. The program requires significant investment and robust coordination. Thus, the predicting factors in students' decision to choose the program are to be identified properly to manage the program. If this is not the case, students may abandon the program or may not achieve the necessary learning outcomes to secure gainful employment.

Implications

This study explores important findings in technical and vocational education under the apprenticeship-based pre-diploma program. The study can be a reference for research and a report on students' decision to choose the apprenticeship-based pre-diploma program. Based on these findings, I have drawn some important conclusions. These conclusions can be useful for students, especially those who are academically weak and economically poor, willing to pursue technical education under an apprenticeship-based pre-diploma program, and technical institutions, parents, and employers (practical implications). This study can contribute to formulating policies to attract the target group toward the program (policy implications). It can also be helpful for future researchers in apprenticeship-based pre-diploma programs (research implications). Here is a brief presentation of the implications:

Practical Implications

Future students, parents, technical schools, and employers of apprenticeship-based pre-diploma programs in technical education can benefit from the findings and conclusion of this study. This study concludes that personal interest is the most influential factor, followed by economic outcomes and subjective norms. Therefore, parents, technical schools, and employers can observe and examine whether the student truly has a genuine interest in the occupation and the apprenticeship modality, ensuring their enrolment. Similarly, students themselves should reflect on whether

their chosen modality and occupation truly align with their passion and interests, focusing on their future prospects rather than succumbing to external pressures and suggestions.

Technical schools and employers play a crucial role in determining the success or failure of their programs. This study concludes that, instead of relying on parental and friend suggestions, we should prioritize students' personal interests during enrollment, consider the program's economic impact, and implement effective advertising and management strategies to enhance word-of-mouth publicity among students. Employers can get the necessary human resources from the program; thus, student selection and good collaboration with technical schools must be effective and democratic. Employers should consider factors such as dropout rates, absenteeism, students' personal interests, realistic expectations of economic outcomes, and reliable sources and relationships in their selection process. Prospective students can also integrate these factors into their decision-making process when selecting an apprenticeship-based pre-diploma program.

Policy Implications

This study's findings and conclusion focus on the factors that predict students' decisions to choose the apprenticeship-based pre-diploma program in Nepal. The predicting factors suggest that the selection process and enrollment criteria must be effective and efficient. There is a need for robust relationships among technical schools, employers, the labor market, CTEVT, and concerned ministries. The policymakers can utilize the findings and conclusions to formulate policies on student selection and enrollment.

Based on the major factors identified in this study—personal interest, economic benefit, and subjective norm—the assessment or selection process can be focused mostly on assessing the applicant's interest, followed by their economic background. Before enrollment, policymakers can also assess their parents or mentors. Policymakers can formulate such policies to address the students' personal interests and their economic background and onboard their mentors or informants in the selection process. The findings and conclusion of this study also demand a policy for joint selection and regulatory teams of technical schools, employers, CTEVT, and the ministry.

Research Implications

This study has explored the factors predicting the students' decision to choose the apprenticeship-based pre-diploma program. The Koshi province in Nepal conducted this research, which is likely the first academic study on students' selection of apprenticeship-based pre-diploma programs in the country. That's why this study can be a good reference for future researchers. Firstly, we can conduct further studies throughout Nepal or other provinces to obtain comparative findings.

Secondly, this study has used exploratory factor analysis (EFA) for factor analysis; moreover, the explored factors can be substantiated with a more rigorous statistical tool, confirmatory factor analysis (CFA), to construct a suitable model. Similarly, this study has used all eight occupations under a single apprenticeship-based pre-diploma program; further studies can specify the apprenticeship-based pre-diploma program in a single occupation in a wider area. These studies may have different influencing factors for the individual occupations, even if they use the same apprenticeship approach. The associated factors might differ across their demographic variables, such as gender, ethnicity, locale, school type, and family income when studied in different occupations separately. Similarly, surveying sample students after their form submission and before class starts can yield a more reliable and valid result.

Similarly, this study has used a cross-sectional survey design; further studies can use longitudinal survey designs for more insights and interesting findings. Moreover, this study has used simple random sampling with a proportionate technique; other sampling techniques, such as stratified, systematic, and cluster sampling, can be used for a more disaggregated result. Similarly, we can construct the scale using the Delphi technique to ensure greater reliability and quality standards. Furthermore, this study can be expanded to explore the relationship between factors and students' satisfaction, factors and perceived employability, factors and graduates' job placement, factors and technical schools' supply, and factors and labor market demand. Future research can adjust mixed methods approaches, involving multiple stakeholders such as instructors, parents, and employers, to improve results and explore other program choice phenomena. Based on the results and conclusions of this study, we can conduct numerous additional studies to gain a deeper understanding of strategies for predicting students' decision to select the apprenticeship-based pre-diploma program.

Final Remarks

This research journey is an exciting and insightful learning experience for me. As a graduate of MTVET (Master in Technical and Vocational Education and Training), I have had numerous opportunities to participate in conferences, presentations, and research projects. These experiences have left me astonished by the features of the apprenticeship-based pre-diploma program in technical subjects. My MPhil research took me a long time and required many suggestions to finalize the topic and research approach. I was keen to explore what factors influence students to choose the program in Nepal. After reviewing some literature, I recognized the need for quantitative research on factors influencing students' decision to choose the apprenticeship-based pre-diploma program in Nepal, as this type of research was not previously available in the country.

I learned that scale construction is one of the crucial parts of quantitative research. After constructing the scale, I realized that I had almost completed the Delphi technique, but I should have completed the entire process. It's crucial to align each research question with the appropriate statistical tool. Due to the nature of my research area, I had to rely on enumerators; this should also be considered when selecting a sample. It is better to do a survey by yourself than others. As a result, some questionnaires contain missing data, making data entry extremely challenging. Researchers must exercise caution and patience when collecting and entering data into SPSS.

The data analysis aspect presents a significant challenge, but thankfully, I have access to studies that utilize the EFA approach to explore career options. I have learned many statistical tools and analysis techniques from YouTube and friends. I am excited and delighted that my study may set a milestone in the field of apprenticeship-based pre-diploma program, revealing future research topics and areas in vocational program choice.

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APPENDICES

Annex I: Reference Questionnaire

1

APPENDIX I

SURVEY OF FACTORS THAT INFLUENCE STUDENTS' DECISION TO ENROLL I INITIAL VOCATIONAL EDUCATION AND TRAINING (IVET) LYCEUMS IN TAJIKISTAN

PART I. STUDENT DEMOGRAPHIC INFORMATION

1. **What is your gender?**
   - ☐ Male
   - ☐ Female
2. **What is your age?**
   - ☐ 15-16
   - ☐ 17-18
   - ☐ 19-20
   - ☐ 21-22
   - ☐ 23 +
3. **Which best describes your place of living?**
   - ☐ Rural
   - ☐ Urban
4. **What grades did you get on the following final exams at the end of 9th grade? (Only those who completed 9th grade)**

Tajik Language	Algebra	Tajik History	Russian Language	Geography	Other_____
☐ 5	☐ 5	☐ 5	☐ 5	☐ 5	☐ 5
☐ 4	☐ 4	☐ 4	☐ 4	☐ 4	☐ 4
☐ 3	☐ 3	☐ 3	☐ 3	☐ 3	☐ 3
☐ 2	☐ 2	☐ 2	☐ 2	☐ 2	☐ 2

5. **What grades did you get on the following final exams at the end of 11th grade? (Only those who completed 11th grade)**

Tajik Literature	Algebra	Tajik History	English Language	Russian Language	Science
☐ 5	☐ 5	☐ 5	☐ 5	☐ 5	☐ 5
☐ 4	☐ 4	☐ 4	☐ 4	☐ 4	☐ 4
☐ 3	☐ 3	☐ 3	☐ 3	☐ 3	☐ 3
☐ 2	☐ 2	☐ 2	☐ 2	☐ 2	☐ 2

6. **What is your mother's highest level of education?**
   - General basic education (9th grade)
   - General secondary education/high school (11th grade)
   - IVET school
   - Secondary VET
   - University

7. **What is your father's highest level of education?**
   - General basic education (9th grade)
   - General secondary education/high school (11th grade)
   - IVET school
   - Secondary VET
   - University

8. **Where do you live during the semester?**
   - In my house
   - In the lyceum's dormitory
   - In a rented house
   - In my relatives' house

9. **Which of the following statements best describes your family situation? (select only one)**
   - Your family has a hard time getting enough money for food, clothing, and basic living costs
   - Your family has just enough money for food, clothing, and basic living costs
   - Your family has a few problems buying what your family needs
   - Your family has no problems buying what your family needs and is able to buy special things

10. **Which of the following member(s) of your family is(are) currently in migration?**
    - Father
    - Mother
    - Brother
    - Sister
    - None

PART II. ENROLLMENT STATUS

Please place a check mark next to the appropriate response.

1. **After which grade of general secondary school did you enroll in IVET lyceum?**
   - ☐ 9th grade
   - ☐ 11th grade

2. **In which year you are currently studying?**
   - ☐ Year 1
   - ☐ Year 2
   - ☐ Year 3

3. **What is the duration of your program?**
   - ☐ 3 years
   - ☐ 2 years
   - ☐ 1 year
   - ☐ Short-term course (1, 3, and 6 months)

4. **Which program you are currently enrolled in? Please place a check mark next to the program you are in.** (If your program is not in the list, please type in the blank space)

Cluster	Programs
Automobile & Transportation	☐ Auto mechanic (engine repair) ☐ Auto mechanic (electrician) ☐ Driver ☐ Truck driver ☐ Trolleybus driver ☐ Assistant locomotive machinist ☐ Assistant machinist of diesel trains ☐ Railroad cashier ☐ Conductor of passenger carriage ☐ Special freight forwarder ☐ Electrician of sound system and railroad signal ☐ Other_____
Business	☐ Accountant ☐ Book-keeper ☐ Other_____
Construction	☐ Carpenter ☐ Wood carving ☐ Architectural plastering ☐ Restorer of plaster/gypsum products
	☐ Painter ☐ Plumber ☐ Brick layer ☐ Crane operator ☐ Tiler ☐ Roofer (steel sheet) ☐ Other_____

Information Technology	☐ Computer Operator ☐ Radio mechanic ☐ TV mechanic/repairer ☐ Cable man – welder ☐ Electrician of telephone line station ☐ Telephone operator ☐ Other_____
Manufacturing & Industrial	☐ Electrician ☐ Gas welder ☐ Electric welder ☐ Chemical lab technician ☐ Lathe operator ☐ Sales equipment mechanic ☐ Miner ☐ Lab technician – analyst of dust/fervor ☐ Lab technician of chemical production ☐ Other_____
Family & Consumer Science (Service Sector)	☐ Cook-confectioner ☐ Tour operator ☐ Tourism/travel agent ☐ Guide ☐ Cashier ☐ Food products seller ☐ Non-food product seller ☐ Waiter ☐ Restaurant manager ☐ Waiter-bartender ☐ Hotel administrator ☐ Booking Agent ☐ Hairdresser ☐ Barber ☐ Tailor ☐ Fashion designer ☐ Cutter ☐ Embroiderer ☐ Costume designer ☐ Shoe repairer ☐ Sewer

	☐ Decorative work specialist ☐ Weaver of cotton, silk, and wool products ☐ Other_____
Agriculture	☐ Mechanic of agricultural machines and equipment ☐ Tractor operator ☐ Bee keeping ☐ Fruits and vegetable farming ☐ Woodsman/forester-Driver ☐ Paramedic veterinary ☐ Plant breeder ☐ Other_____

PART III. INFLUENCING FACTORS

1. **To what extent did the following people, events, or factors, influenced your decision to enroll in IVET lyceum?**

Influences		How much did each influence your decision to enroll in IVET lyceum?				
		1	2	3	4	5
		Not At All	A Little	Unsure	Not That Much	A Lot
1.	School teacher					
2.	Class supervisor					
3.	School director					
4.	Mother					
5.	Father					
6.	Brother or Sister					
7.	Relative(s)					
8.	Friend(s)					
9.	Open door event at IVET lyceum					
10.	To avoid military service					
11.	Studying in IVET is easier					
12.	IVET lyceums provide hands-on experience					
13.	Free food in lyceum					
14.	Free dormitory					
15.	Want to find a job sooner					
16.	IVET lyceum is close to home					
17.	Duration of study in IVET lyceum					
18.	TV program about IVET lyceum					
19.	Marketing materials (newspaper, brochures,)					
20.	Education fair					

2. **To what extent did the following people, events, or factors, influenced your decision to choose the vocational program you are studying?**

Influences		How much did each influence your decision to enroll in IVET program?				
		1	2	3	4	5
		Not At All	A Little	Unsure	Not That Much	A Lot
1.	School teacher					
2.	Class supervisor					
3.	School director					
4.	Mother					
5.	Father					
6.	Brother/Sister					
7.	Relatives					
8.	Friend(s)					

9.	Duration of the program					
10.	Prior experience in this field					
11.	Want to work in this field after program completion					
12.	Better job opportunities in this field					
13.	Higher salary paid in this field					
14.	Better opportunity to start a small business in this field					
15.	A TV program /advertisement about this IVET program					
16.	Marketing materials (brochures, newspaper, etc.)					

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PART IV: ADDITIONAL INFORMATION

1. **What do you plan to do after completing your study?**
   - ☐ I plan to find a job in my field of study
   - ☐ I plan to go to Russia to work in any field
   - ☐ I plan to go to university
   - ☐ Not sure what to do

2. **How much confidence do you have in that you will find your future job related to your current program?**

Not at all	A little	Can't say anything	Not that much	Very much
1	2	3	4	5

3. **Are you aware of the services provided by the National Career Guidance Center?**
   - ☐ Yes
   - ☐ No

4. **Have you ever thought about changing your program of study?**
   - ☐ Yes
   - ☐ No

   If Yes, why (short answer) _____
   _____

5. **Have you ever thought about quitting your study?**
   - ☐ Yes
   - ☐ No

   If Yes, why (short answer) _____
   _____

Thank you for taking the time and effort to respond to this survey!

Annex II: Consent to use questionnaire

KU SOED MAIL

Bikash Ghaju <bikash_mpds22@kusoed.edu.np>

Request for Questionnaire and Consent

6 messages

Bikash Ghaju <bikash_mpds22@kusoed.edu.np> Sat, Feb 11, 2023 at 8:40 AM
To: farid.safarmamad@gmail.com

Dear Farid Safarmamad,
Greetings from Nepal

I hope this email finds you well.

I am an MPhil scholar and a research assistant at Kathmandu University. My dissertation topic is quite similar to your PhD Thesis **FACTORS THAT INFLUENCE STUDENTS' DECISIONS TO ENROLL IN INITIAL VOCATIONAL EDUCATION AND TRAINING (IVET) LYCEUMS IN TAJIKISTAN** I plan to research on **Factors influencing Students in Choosing an Apprenticeship Program in TVET**. I am very excited to see your thesis. For the reliability and validity of the research scale, I humbly request you provide your questionnaire and allow me to proceed accordingly.

I am very hopeful to have your support for my academic journey. Your questionnaire will be adopted only for my MPhil dissertation. I would love to have your other articles related to TVET.
Thank you so much

–
Warm Regards,
Bikash Ghaju
MPhil Scholar - 2022
Research Assistant
MPhil in Development Studies
Kathmandu University School of Education

Farid Safarmamad <farid.safarmamad@gmail.com> Sat, Mar 4, 2023 at 9:08 PM
To: Bikash Ghaju <bikash_mpds22@kusoed.edu.np>

Dear Bikash,
Thank you for your email and your interest in using my questionnaire. I'm sorry for getting back to you so late.
In regards to the use of the questionnaire, as you probably have seen in my methodology chapter, I mention that the questionnaire was originally developed by someone else. I asked for their permission to adapt it for my needs.
I am fine with you using my adapted questionnaire and hereby give my consent. You might also need to check your university's requirements whether or not they want you to request permission from the primary owner.

I wish you good luck with your studies and research.
Sincerely,
Farid

Annex III: Item Analysis

Kathmandu University School of Education
Hattiban, Lalitpur, Nepal
MPhil in Development Studies 2022

Title of Dissertation (शोधपत्रको शिर्षक)

औद्योगिक प्रशिक्षणमा आधारित प्रि-डिप्लोमा कार्यक्रम छनोट गर्नका लागि विद्यार्थीहरुले गर्ने निर्णयहरुको भविष्यवाणी गर्ने कारकहरु
(Factors Predicting Students' Decision to Choose Apprenticeship-based pre-diploma program)

विकास घजु (Bikash Ghaju)
शोध विद्यार्थी (Research Student)

कृपया तल दिएका बिकल्पहरुमध्ये आफूलाइ सही लागेमा ठीक (Right) र सही नलागेमा बेठीक (Wrong) कोष्ठ (Column) मा ✓ चिन्ह लगाउनुहोस् ।
नोट: यो सर्वेक्षणले मलाई यथार्थ र वैध (Valid) प्रश्नावली (Questionnaire) बनाउन सहयोग गर्ने भएकोले कृपया आफूलाई सही लागेको कोष्ठमा मात्र ✓ चिन्ह लगाउनु हुन अनुरोध गर्दछु ।

कारक तत्वहरु Factors	**क्र.स. S.No.**	**कथनहरू Statements**	**ठीक Right %**	**बेठीक Wrong**
Personal Interest Factor	निम्न लिखित कारणहरुले गर्दा मैले औद्योगिक प्रशिक्षार्थी कार्यक्रम (Apprenticeship-based pre-diploma program) छानेको हुँ ।			
	1	कोही प्राविधिक काम गरिरहेको देख्दा मलाई रमाइलो लाग्ने भएकोले । As I feel happy when someone is doing technical jobs.	94.4	
	2	मलाई सैद्धान्तिकभन्दा प्रयोगात्मक विषय बढी मन परेकोले। Due to my interest in practical subject more than theoretical subject.	95.1	
	3	प्राविधिक विषयमा रुचि भएकोले । Due to my interest in technical subject.	100	
	4	मलाई वास्तविक कार्यस्थलमा आधारित प्राविधिक शिक्षा मन परेकोले . Due to my interest in real workplace-based technical education.	91.8	
	5	अरु प्राविधिक कार्यक्रमहरुभन्दा औद्योगिक प्रशिक्षार्थी कार्यक्रम मलाई बढी मन मन परेकोले । Due to my most interest in the apprenticeship-based pre-diploma program among technical programs.	88.5	
	6	आफू औद्योगिक प्रशिक्षार्थी भई गर्व महसुस हुने भएकोले । As I feel proud of being an apprentice.	95.1	
	7	प्राविधिक क्षेत्रलाई वृत्ति (Career) बनाउन । To make the technical sector a career.	98.4	
		कुनैपनि उमेरका विद्यार्थीले पढ्न पाउने भएकोले ।		

	8	Because students of any age can study it.	77	
	9	मेरो फुर्सदको समय सदुपयोग गर्न । To utilize my leisure time.	70	
	10	पढाईलाई निरन्तरता दिन । To continue my study.	86.9	
	11	नयाँ सीप सिक्न । To learn new skill.	100	
Economic Factors	12	निःशुल्क भएको कारणले । Apprenticeship-based pre-diploma program is free of cost so I selected it.	70.5	
	13	निर्वाह भत्ता स्वरूप पैसा पाउने भएकोले Because of the incentive money	55.4	
	14	सिक्दै कमाउँदै गर्न पाउने व्यवस्था भएकोले । Due to the system of learning and earning.	90.2	
	15	मेरो परिवारको आर्थिक अवस्था कमजोर भएको कारणले । Due to the family's low-income status.	83.6	
	16	राम्रो कमाई हुने आशाले । Expecting for better earnings.	90.2	
	17	प्रशिक्षण गरेकै कम्पनीहरुमा रोजगारीको सम्भावना उच्च भएकोले । Due to a high chance of employment in the same companies.	86.9	
	18	स्वदेशी बजारमै रोजगारी दिने आशा देखेर । Seeing hope for a job in the domestic market.	93.4	
	19	बैदेशिक श्रम बजारमा जान सहयोग गर्ने आशा देखेर । Seeing hope for a job in the international labor market.	54.1	
	20	आत्मनिर्भर बन्नको लागि । To be self-dependent.	96.7	
	21	स्वतन्त्र (freelancer) भएर काम गर्न सक्ने आशा भएकोले । Hope to work as a freelancer.	91.8	
	22	आफ्नै कम्पनी खोल्ने आशा भएकोले । Hope to establish own company.	86.9	
	23	परिवारको आर्थिक अवस्था सूधार गर्ने आशा भएकोले । Hope to improve my family's economic condition.	96.7	
Non-Economic Factors	24	विज्ञापनले मलाई आकर्षित बनाएकोले । Since the advertisement attracted me.	62.3	
	25	उही प्राविधिक विषयको डिप्लोमा कार्यक्रममा जान । To pursue a diploma program in the same technical subject.	78.7	
	26	कक्षा ११ को साधारण विषयमा जान । To pursue general subjects in grade 11.	32.8	
	27	कक्षा ११ को उही प्राविधिक विषयमा जान । To pursue the same technical subject in grade 11.	52.5	

	28	कम्पनीमा वास्तविक कार्य अनुभव पाउन । To gain real work experience in the company.	96.7	
	29	जनसम्पर्क बढाउनको लागि । To establish public relation.	93.4	
	30	नयाँ कार्यक्रमको अनुभव लिन । To gain experience in new program.	95.1	
	31	नयाँ कार्यक्रममा धेरै अवसरहरु हुन सक्ने भएकोले । As there may be lots of opportunities in new program.	95.1	
	32	पेशागत सीपको साथै जीवन उपयोगी सीप पनि हासिल गर्न । To gain professional skill as well as life skill	96.7	
	33	रोजगार भई देश विकासमा योगदान गर्नको लागि । To contribute in country development through being employed.	92.9	
	34	औद्योगिक प्रशिक्षार्थी कार्यक्रमको डिग्री पाउनको लागि । To gain the degree of the apprenticeship-based pre-diploma program.	93.4	
	35	औद्योगिक प्रशिक्षार्थी कार्यक्रमको डिग्री स्वदेशी श्रम बजारमा माग भएकोले । Since the apprenticeship degree is demanded in domestic labor market.	90.2	
	36	औद्योगिक प्रशिक्षार्थी कार्यक्रमको डिग्री वैदेशिक रोजगारीका लागि माग भएकोले । Since the apprenticeship degree is demanded in the international labor market.	62.5	
	37	औद्योगिक प्रशिक्षार्थी कार्यक्रम लिएमा घरपरिवारले मलाई माया गर्ने भएकोले । Family members love me if I join the apprenticeship-based pre-diploma program.	48.2	
	38	औद्योगिक प्रशिक्षार्थी कार्यक्रम लिएमा समुदायमा सम्मान पाउने भएकोले । I will get respect in the community if I join the apprenticeship-based pre-diploma program.	67.2	
	39	औद्योगिक प्रशिक्षार्थी कार्यक्रम लिएमा साथीहरु माझ लोकप्रीय (पपुलर) हुन सकिने भएकोले । I will be popular among friends if I join the apprenticeship-based pre-diploma program.	54.1	
People with relationship Factors	40	मेरो परिवारका सदस्य/हरुको सुझाव बमोजिम As per my family member's/s' recommendation.	75.4	
	41	मेरो परिवारका सदस्य/हरुको दबाबका कारण । Because of my family member's/s' pressure.	13.1	
	42	समुदायका मानिसहरुको औद्योगिक प्रशिक्षार्थी कार्यक्रमप्रति सकरात्मक सोच भएकोले । Due to community people's positive perception toward the apprenticeship-based pre-diploma program	80.3	

	43	मेरो छिमेकी/हरुको सुझाव अनुसार । As per my neighbor's/s' recommendation.	28.6	
	44	मेरो आफन्त/हरुको सुझाव अनुसार । As per my relative's/s' recommendation.	39.3	
	45	मेरो साथी/हरुको सुझाव अनुसार । As per my friend's/s' recommendation.	46.4	
	46	पूर्व औद्योगिक प्रशिक्षार्थी/हरुको सुझाव अनुसार। As per the ex-apprentice's/'s recommendation.	53.6	
	47	मेरो पूर्व विद्यालयका कर्मचारी/हरुको सुझाव अनुसार । As per my previous school staff's/s' recommendation.	41.4	
	48	हालको प्राविधिक विद्यालयका कर्मचारी/हरुको सुझाव अनुसार। As per the current technical school's staff's/s' recommendation.	55.4	

यहाँको अमूल्य सहयोगको लागि धन्यवाद।

Annex IV: Final Scale for Survey

1

आदरणीय विद्यार्थी/औद्योगिक प्रशिक्षार्थीज्यू,
नमस्कार तथा अभिवादन।

म काठमाडौं विश्वविद्यालय स्कूल अफ एजुकेशन, हात्तिवन, ललितपुरमा एम.फिल. (MPhil) तहमा अध्ययनरत विद्यार्थी हुँ। यो कार्यक्रम अन्तर्गत मेरो शोधपत्र (Dissertation) को शीर्षक नेपालमा औद्योगिक प्रशिक्षार्थी तालिम कार्यक्रम छनोटका लागि विद्यार्थीले गर्ने निर्णयका सम्भावित कारकहरु **(Factors Predicting Students' Decision to Choose Apprenticeship Program in Nepal)** रहेको छ। यस शोधको उद्देश्य कुन कुन कारकतत्वहरुका कारणले विद्यार्थीहरुले औद्योगिक प्रशिक्षार्थी तालिम कार्यक्रम छनोटको निर्णय लिन्छन् भनेर पत्ता लगाउनु रहेको छ। यो उद्देश्य पुरा गर्न यहाँलाई यो प्रश्नावली भर्न दिइएको हो। यहाँको सहयोग मेरो शैक्षिक यात्राका लागि निकै नै अमूल्य हुनेछ, त्यसैले यहाँलाई यो प्रश्नावली भरेर सहयोग गरिदिनु हुन हार्दिक अनुरोध गर्दछु।

यहाँको उत्तर नितान्त गोप्य राखिनेछ र त्यसलाई केवल अनुसन्धान प्रयोजनको लागि मात्र प्रयोग गरिनेछ। यस सर्वेक्षणमा यहाँको परिचय खुल्ने कुनै प्रकारको सूचना राखिएको छैन र यस सम्बन्धमा कतै जिकीर गर्ने छैन। साथै गोपनियताका सम्बन्धमा मैले काठमाडौं विश्वविद्यालयबाट Ethical Approval समेत लिइसकेको जानकारी दिन चाहन्छु। कृपया निम्न उल्लेखित सबै प्रश्नहरुको यथार्थ उत्तर दिनुहोला। यहाँको समय र सहयोगप्रति पुनः आभार प्रकट गर्दछु। यो सर्वेक्षण भर्न यहाँलाई १५ मिनेट जति समय लाग्न सक्छ।

विकास घर्ती
शोधकर्ता

भाग १

कृपया दिइएका खाली ठाँउहरुमा लेख्नुहोस् र कोष्ठ (Box) हरुमा ✓चिन्ह लगाउनुहोस्।

१. **नाम (Name) (ऐच्छिक/Optional):** .....

२. **उमेर (Age):** ..... (वर्ष/Years) [यदि १८ वर्षभन्दा मुनि भए प्रधानाध्यापकको दस्तखत: .....]

३. **लिङ्ग (Gender):** १. पुरुष (Male) [ ] २. महिला (Female) [ ] ३. अन्य (others) [ ]

४. **ठेगाना (Address) (ऐच्छिक/Optional):** .....

५. **पालिकाको प्रकार:** १. महानगरपालिका (Metropolitan City) [ ] २. उपमहानगरपालिका (Sub-Metropolitan City) [ ]
३. नगरपालिका (Municipality) [ ] ४. गाउँपालिका (Rural Municipality) [ ]

६. **क्षेत्र (Region):** १. गाउँ (Rural) [ ] २. शहर (Urban) [ ]

७. **भौगोलिक क्षेत्र (Geographical Region):** १. हिमाल (Mountain) [ ] २. पहाड (Hill) [ ] ३. तराई (Tarai) [ ]

८.**जातीयता (Ethnicity):** १. ब्राम्हण [ ] २. क्षेत्री [ ] ३. आदिवासी/जनजाति [ ] ४. दलित [ ] ५. अन्य (उल्लेख गर्नुहोस्): .....

९. **आफ्नो औद्योगिक प्रशिक्षार्थी तालिम कार्यक्रमको विषय छान्नुस् (Select your apprenticeship trade):**
1. Electrical Engineering [ ] 2. Mechanical Engineering [ ] 3. Civil Engineering [ ]
4. Automobile Engineering [ ] 5. Hotel Management [ ] 6. Information Technology [ ]
7. Early Childhood Development Facilitation [ ] 8. Tea Technology [ ]

१०. **तपाईले एस.एल.सी/एस.इ.ई. (SLC/SEE) दिनुभएको विद्यालयको प्रकार:** १. सामुदायिक (Public) [ ] २. नीजि (Private) [ ]

११. **अहिले पढिरहनु भएको CTEVT अन्तर्गत विद्यालयको प्रकार:**
१. आंगिक (Constituent)[ ] २. साझेदारी (Partnership) [ ] ३. सामुदायिक टेक्स (Community TECS) [ ] ४. नीजि (Private) [ ]

१२. **तपाईको एस.इ.ई./एस.एल.सी(S.E.E./S.L.C.) को प्राप्ताङ्क लेख्नुहोस्:** सिजिपिए (CGPA) ..... वा (Or) प्रतिशत (Percentage) .....%

१३. **एस.इ.ई./एस.एल.सी(S.E.E./S.L.C.) पास गर्नुभएको वर्ष:** वि.सं.(B.S.): .....

१४. **बुबाको पेशा (Father's Occupation):** .....
१५. **तपाईको बुबाको पेशालाई वर्गीकरण गर्नुहोस्:** १. प्राविधिक (Technical) [ ] २. प्राविधिक बाहेक अन्य (Others than Technical) [ ]

१६. **आमाको पेशा (Mother's Occupation):** .....
१७. **तपाईको आमाको पेशालाई वर्गीकरण गर्नुहोस्:** १. प्राविधिक (Technical) [ ] २. प्राविधिक बाहेक अन्य (Others than Technical) [ ]

१८. **परिवारको वार्षिक आम्दानी (Yearly income of your Family):**
१. रु. २ लाखसम्म [ ] २. रु. २ लाखभन्दा बढी रु. ४ लाखसम्म [ ] ३. रु. ४ लाखभन्दा बढी ६ लाखसम्म [ ]
४. रु. ६ लाखभन्दा बढी रु. ८ लाखसम्म [ ] ५ . रु. ८ लाखभन्दा बढी १० लाखसम्म [ ] ६ . रु. १० लाखभन्दा बढी [ ]

१९. **हालको विषयसँग सम्बन्धित कुनै तालिम लिनुभएको छ ?** छ (Yes) [ ] छैन (No) [ ]

२०. **हालको विषयसँग सम्बन्धित कामको अनुभव छ ?** छ (Yes) [ ] छैन (No) [ ]

२१. **के तपाईले बिचैमा पढाइ छोड्नु भएको (Dropout) थियो ?** हो (Yes) [ ] होइन (No) [ ]

२२. **गुरुमा तपाईको कुनै साथी औद्योगिक प्रशिक्षार्थी तालिम (Apprenticeship) कार्यक्रममा थियो ?** थियो (Yes) [ ] थिएन (No) [ ]

२३. **तपाईको परिवारको कुनै सदस्यले औद्योगिक प्रशिक्षार्थी तालिम कार्यक्रम (Apprenticeship) लिनु भएको छ?** छ (Yes) [ ] छैन (No) [ ]

२४. **तपाईको कोही छरछिमेकीले औद्योगिक प्रशिक्षार्थी कार्यक्रम (Apprenticeship) लिनु भएको छ?** छ (Yes) [ ] छैन (No) [ ]

भाग २

कृपया तल दिइएका प्रत्येक वाक्यहरूलाई ध्यानपूर्वक पढी बिकल्पहरुमध्ये यहाँको सहमतिलाई तल उल्लेख गरिएजस्तो ६ = पूर्ण रुपमा सहमतदेखि १= अति थोरै सहमतसम्म ✓ चिन्ह लगाई दिनुहोस् ।

६ = पूर्ण सहमत Strongly Agreed	५ = धेरै जसो सहमत Mostly Agreed	४ = ठिकै सहमत Reasonably Agreed	३ = थोरै सहमत Somewhat Agreed	२ = अलि थोरै सहमत Fairly Agreed	१= अति थोरै सहमत Least Agreed

क्र.स	कथनहरू (Statements)	६	५	४	३	२	१
निम्न लिखित व्यक्तिगत रुचिहरुका कारणले मैले औद्योगिक प्रशिक्षार्थी तालिम कार्यक्रम छानेको हुँ । **Because of the following personal interests, I have chosen the apprenticeship program.**							
१	कोही प्राविधिक काम गरिरहेको देख्दा मलाई रमाइलो लाग्ने भएकोले I enjoy someone doing technical works	६	५	४	३	२	१
२	मलाई विद्यालयको पढाईभन्दा काम गरेर सिकिने विषय बढी मन परेकोले I like work-based learning more than school education	६	५	४	३	२	१
३	मलाई प्राविधिक विषयमा रुचि भएकोले I am interested in a technical subject	६	५	४	३	२	१
४	अरु प्राविधिक कार्यक्रमहरुभन्दा यो कार्यक्रम मलाई बढी मन मन परेकोले I like this program more than other technical programs	६	५	४	३	२	१
५	नयाँ सीप सिक्न To learn a new skill	६	५	४	३	२	१
६	यो कार्यक्रमको अनुभव लिन To gain experience of this program	६	५	४	३	२	१
निम्न लिखित आर्थिक तत्वहरुका कारणले मैले औद्योगिक प्रशिक्षार्थी तालिम कार्यक्रम छानेको हुँ । **Because of the following economic factors, I have chosen the apprenticeship program.**							
७	औद्योगिक प्रशिक्षार्थी तालिम कार्यक्रम निःशुल्क भएको कारणले The apprenticeship program is free of cost	६	५	४	३	२	१
८	यस कार्यक्रममा प्रोत्साहान भत्ताको रुपमा पैसा पाने पाउने भएकोले Because of the money as incentive allowance in this program	६	५	४	३	२	१
९	सिक्दै कमाउँदै गर्ने पाउने व्यवस्था भएकोले Because of the system of learning and earning	६	५	४	३	२	१
१०	मेरो परिवारको आर्थिक अवस्था कमजोर भएको कारणले My family's low-income status	६	५	४	३	२	१
११	आत्मनिर्भर बन्नको लागि To be self-dependent	६	५	४	३	२	१
१२	यो कार्यक्रमले मेरो परिवारको आर्थिक अवस्था सुधार गर्ने भएकोले This program improves my family's economic condition	६	५	४	३	२	१
निम्न लिखित विविध कारणहरुले गर्दा मैले औद्योगिक प्रशिक्षार्थी तालिम कार्यक्रम छानेको हुँ । **Because of the following other factors, I have chosen the apprenticeship program.**							
१३	पढाईलाई निरन्तरता दिन To continue my study	६	५	४	३	२	१
१४	मेरो फुर्सदको समय सदुपयोग गर्न To utilize my leisure time	६	५	४	३	२	१
१५	कुनैपनि उमेरका विद्यार्थीले पढ्न पाउने भएकोले Students of any age can study it	६	५	४	३	२	१
१६	कम्पनीमा वास्तविक कार्य अनुभव पाउन To gain real work experience in the company	६	५	४	३	२	१
१७	जनसम्पर्क बढाउनको लागि To establish public relation.	६	५	४	३	२	१
१८	पेशागत सीपको साथै जीवन उपयोगी सीप पाने हासिल गर्ने To gain professional skill as well as life skill	६	५	४	३	२	१

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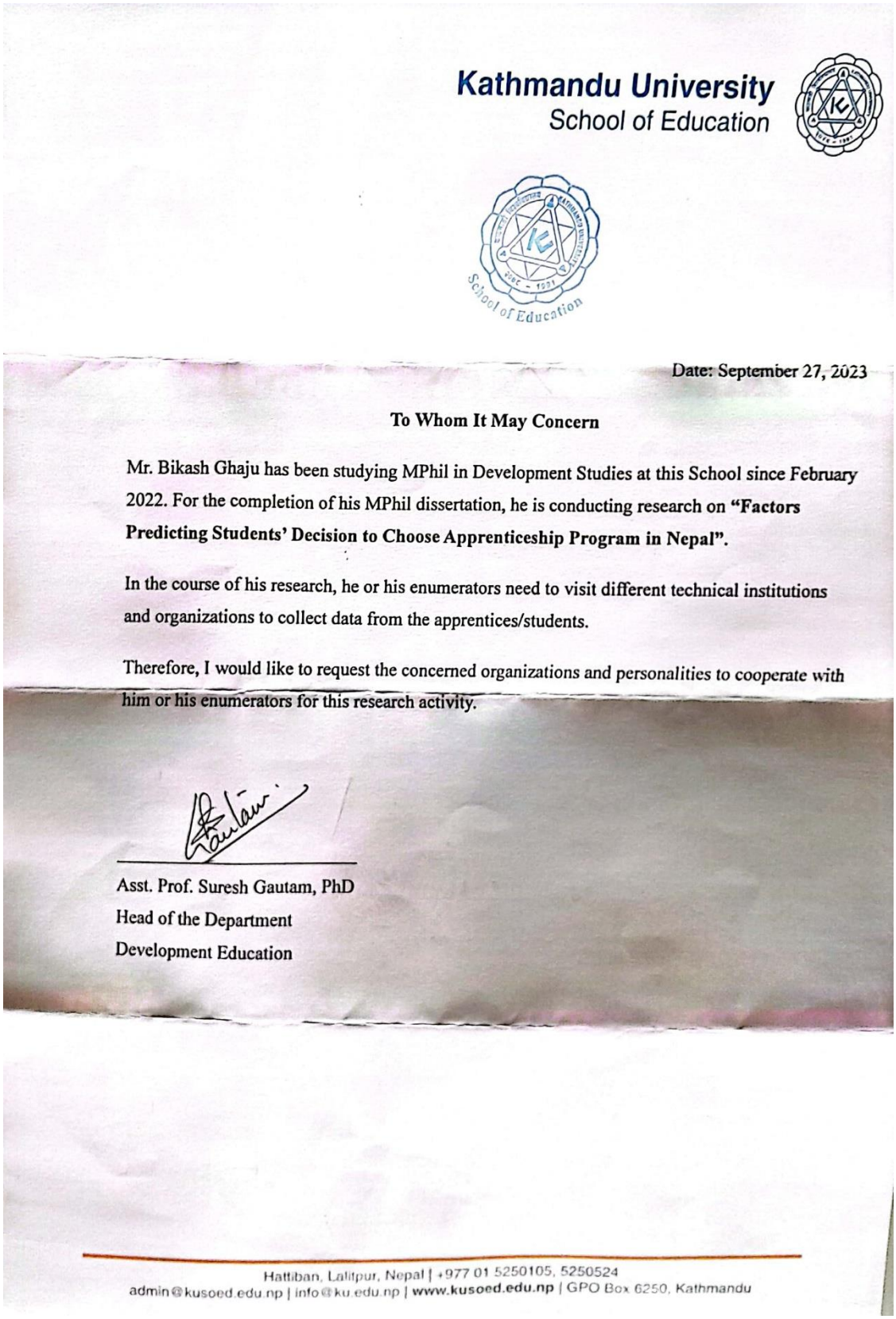
६ = पूर्ण सहमत Strongly Agreed	५ = धेरै जसो सहमत Mostly Agreed	४ = ठिकै सहमत Reasonably Agreed	३ = आंशि सहमत Somewhat Agreed	२ = अलि आंशि सहमत Fairly Agreed	१ = अति आंशि सहमत Least Agreed

निम्न लिखित स्रोतहरुका कारणले मैले औद्योगिक प्रशिक्षार्थी तालिम कार्यक्रम छानेको हुँ। **Because of the following sources, I have chosen the apprenticeship program.**							
१९	विज्ञापनले मलाई आकर्षित बनाएकोले The advertisement attracted me	६	५	४	३	२	१
२०	समुदायका मानिसहरुको यस कार्यक्रमप्रति सकारात्मक सोच भएकोले Community people have positive perception toward the program	६	५	४	३	२	१
२१	मेरो परिवारका सदस्यको सुझाव बमोजिम On my family member's suggestion	६	५	४	३	२	१
२२	मेरो परिवार बाहेकका व्यक्तिहरुको सुझाव बमोजिम On suggestion from the people beyond my family	६	५	४	३	२	१
२३	यो प्राविधिक विद्यालयको भौतिक संरचना मन परेर I like the physical infrastructure of this technical school	६	५	४	३	२	१
२४	यो प्राविधिक विद्यालयको बारेमा थाहा पाएर Knowing about the technical school	६	५	४	३	२	१
२५	यो कार्यक्रमको बारेमा जानकारी पाएर Having information about this program	६	५	४	३	२	१
निम्न लिखित सम्भावनाहरुका कारणले मैले औद्योगिक प्रशिक्षार्थी तालिम कार्यक्रम छानेको हुँ। **Because of the following prospects, I have chosen the apprenticeship program.**							
२६	राम्रो कमाई हुने आशाले Expecting for better earnings.	६	५	४	३	२	१
२७	यो सीपलाई आफ्नो पेशा बनाउन To make this skill to my profession	६	५	४	३	२	१
२८	प्रशिक्षण गरेकै कम्पनीहरुमा रोजगारीको सम्भावना उच्च भएकोले High chance of employment in the same companies	६	५	४	३	२	१
२९	स्वदेशी बजारमै रोजगारी पाउने आशा देखेर Hope for a job in the domestic market	६	५	४	३	२	१
३०	वैदेशिक श्रम बजारमा जान सहयोग गर्ने आशा देखेर Hope for a job in the international labor market	६	५	४	३	२	१
३१	आफ्नै सम्पर्कमा स्वतन्त्र (फ्रिल्यान्सर) भएर काम गर्न सकिने आशा भएकोले Hope to work as a freelancer on own contact	६	५	४	३	२	१
३२	आफ्नै संस्था/कम्पनी खोल्ने आशा भएकोले Hope to establish own company	६	५	४	३	२	१
३३	यस्ते प्राविधिक विषयको डिप्लोमा कार्यक्रममा जान To pursue a diploma program in this kind of technical subject	६	५	४	३	२	१
३४	पछि म साधारण विषयमा पनि जान मिल्ने भएकोले I can also go to the general education	६	५	४	३	२	१
३५	नयाँ कार्यक्रममा धेरै अवसरहरु हुन सक्ने भएकोले There may be lots of opportunities in new program	६	५	४	३	२	१
३६	औद्योगिक प्रशिक्षार्थी तालिम कार्यक्रमको डिग्री पाउनको लागि To gain the degree of the apprenticeship program	६	५	४	३	२	१
३७	औद्योगिक प्रशिक्षार्थी तालिम कार्यक्रमको डिग्री श्रम बजारमा माग हुने भएकोले The apprenticeship degree is demanded in labor market	६	५	४	३	२	१

यहाँको अमूल्य सहयोगको लागि धन्यवाद।
Thank you for your kind support.

Annex V: Recommendation Letter of KUSOED



Kathmandu University
School of Education

School of Education

Date: September 27, 2023

To Whom It May Concern

Mr. Bikash Ghaju has been studying MPhil in Development Studies at this School since February 2022. For the completion of his MPhil dissertation, he is conducting research on **"Factors Predicting Students' Decision to Choose Apprenticeship Program in Nepal"**.

In the course of his research, he or his enumerators need to visit different technical institutions and organizations to collect data from the apprentices/students.

Therefore, I would like to request the concerned organizations and personalities to cooperate with him or his enumerators for this research activity.

Asst. Prof. Suresh Gautam, PhD
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Annex VI: Results from Exploratory Factor Analysis

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.719
Bartlett's Test of Sphericity	Approx. Chi-Square	477.074
	df	55
	Sig.	.000

Communalities		
	Initial	Extraction
2_I like work-based learning more than school education	1	0.597
3_I am interested in technical subject	1	0.559
4_I like this program more than other technical programs	1	0.445
7_The apprenticeship-based pre-diploma program is free of cost	1	0.677
8_Because of the money as incentive allowance in this program	1	0.674
9_Because of the system of learning and earning	1	0.467
19_The advertisement attracted me	1	0.599
20_Community people have positive perception toward the program	1	0.592
21_On my family member's suggestion	1	0.56
22_On suggestion from the people beyond my family	1	0.437
	Average	0.5607

Extraction Method: Principal Component Analysis.